

# HOUSING

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## HOMES VS. DWELLING MACHINES

### AS IT IS TO BE IN RUSSIA

There has been much discussion in Russia in recent months of what the Communist dwelling place of the future is to be like; and considerable strife has broken out over the workingmen's living communities which have been established, and which are the urban counterpart of the agricultural collective form of living to be found in the rural districts.

Radical youth is all for community life as well as for community work. The students' home without separation of the sexes is regarded by many as the ideal method of living. Even Lenin's widow had to wage a long and arduous fight to have the right to have a quiet living room of her own. The radicals advocate not only common rooms for working, reading and recreation but also advocate the common bedroom.

With the changed conditions that have come about in Russia with regard to the marital relation and the facility with which a man may shed his wife, or vice versa, competent observers see the desire for the common bedroom as the next step in the direction of greater "freedom". They point out that there is no rule under the new regime as to how many women the Communist may bless with his favors before he incurs proceedings in the party court; that suicides resulting from disappointment in love are by no means rare; and that court records for the past two years tell of many sensational trials picturing dreadful details of moral corruption, especially among the Communist youth—the country's hope and future.

It is also pointed out that Russia's penal code contains no punishment for abortion; that no public funds are provided to really free the expectant mother from the care which she and her new-born require; and that the tragedy of the child born out of wedlock is not done away with by the abolition of the moral code, so long as abortion caused

by distress, and suits for alimony remain a common occurrence of everyday life.

Aside from this desire of "flaming youth" for a common bedroom in this "enlightened" land, "What are the trends in Russia today with regard to the housing of the future, and what is the home of the future to be like?"

### THE RUSSIAN HOME OF THE FUTURE

According to competent observers, the Russian home of the future will have no kitchen but will have a general meeting hall, a nursery, a "Lenin corner" and a restaurant. Public laundries are a feature of practically every Russian plan for future methods of living, as well as present ones. This is said to be dictated by necessity, by lack of soap and by lack of space.

What advanced ideals of ventilation and air-conditioning prevail in the Russia of today and are likely to prevail in the Russia of the future can be realized when it is known that 12 square feet of space is today allotted to each person in Russian homes as adequate, that the windows are sealed with putty 7 months of the year, and that the wet clothes after being washed are hung up to dry inside the living rooms.

There is much discussion going on and considerable dispute between architects and social workers as to whether the city of the future in Russia is to be a tenement city or a city of small homes.

At the present time the whole tendency is toward the erection of large block dwellings such as prevail in New York, Paris, Berlin and other centers of population. Although these new apartment buildings are planned for each family to have several rooms to occupy, as soon as the buildings are completed it always turns out that each of the rooms is taken by a whole family.

Russia has been having considerable experience with communal types of dwellings, especially in the rural districts. Here when a settlement had to be added to, or a new factory built in a short time, the old established system was naturally followed. The model for such housing in this land that is held up to us as representing everything in the way of modern enlightenment and progress, was the discredited barracks used to house railroad laborers—a type execrated by housing reformers and students of social affairs.

There is heated discussion all over Russia as to the form the city of the future will take—discussion seems to be Russia's chief output at the present time and likely to be her chief output for years to come.



Under the Five Year Plan Russia's entire industrial structure is being reorganized and the question arises whether the large cities of the past are to be abolished and the population spread throughout the country into smaller communities. There is also much discussion as to the type of community that is to be built in the new agricultural centers, as well as in the industrial ones.

### THE SOCIALISTIC CITY

The charge is made that under the Five Year Plan much attention has been given to the development of industry but little attention has been given to the planning of the socialistic city. While vast sums are to be spent in the housing of workers, it is feared that the new towns are to be constructed after the worst traditions of the past.

The old Russian city—a product of the capitalistic era—many believe has no place in the new Communist regime, and a totally different type of city they hold must be developed. As now constituted the city is the center of industry, trade, transportation, population, administrative control. If such a city continues to grow, it is held that it will mean congestion, life in small tenements, isolation from nature—which it is claimed are all defects due to a social order built on private profit.

It is pointed out that long distance transmission of power and better transportation will permit a wider latitude in founding settlements and a wider distribution of population; that as the large centers lose their dominant position, the rural communities it is believed will approach the present city in appearance, convenience and facilities. This is a natural outgrowth of the collectivization movement which aims to convert about 27,000,000 small individual farm holdings into something like 50,000 large-scale State and communal agricultural enterprises.

### NO MORE LARGE CITIES

One scheme which contemplates the elimination of large cities has been proposed by L. Sabsovitch, a Soviet economist and member of the State Planning Commission which prepared the Five Year Plan. In his scheme it is suggested that in place of the present-day cities and villages there should be more or less extensive settlements. In these there will be not only homes for agricultural workers but also tractor stations, garages, warehouses, repair shops, power houses, laboratories, factories, hospitals, schools, etc.



In view of the high degree of mechanization of agricultural labor and the greatly increased use of machines, the number of people required to work the farms in future will be comparatively small. For this reason the settlements should be planned for groups of collective farms situated not far from one another.

### THE HOME MUST GO

It is his view also that, whether the settlements are industrial or agricultural, they must be deprived of those institutions that foster individualism. The individual home, therefore, must go; for, the home is recognized as the basis of the modern city and the cradle of the family. The larger part of all cities is made up of homes.

It is recognized that in the home around the fireside are nurtured the ideals of kinship, personal attachment, exalted self-interest, privacy—all the individualistic concepts of life.

As their philosophy calls for the breaking down of all such aspects of individualism and of all the elements that enter into it, they naturally are directing their attack against the home. For, they realize that the problem of creating a new type of man, a new type of woman, a new type of child and a new attitude toward government, is a problem largely of providing a suitable environment.

Thus the home has become the center of attack.

### “DWELLING MACHINES”

In Mr. Sabsovitch's scheme it is proposed to build homes that shall be used by adults only for sleeping purposes—what in Germany and other European countries the modernists are beginning to speak of as “dwelling machines.” The small isolated house is to go. In place of it are to rise huge block dwellings, provided with all the comforts of light, heat, elevator service, plumbing and cleaning devices.

About 3,000 persons are to live in each of these communal buildings which are to be built in groups connected by a common courtyard laid out in park-like fashion.

The rooms are to be arranged in series according to their functions. There will be rooms for married people, rooms for the unmarried, reception rooms, dining rooms, lecture rooms, study rooms, etc. There is to be no private ownership of furniture. Each room will be furnished according to the taste of the occupant as a part of the compensation for the compulsory social labor that he will be compelled to render. In order that the rooms may not be cluttered up with pieces of furniture, the latter are to be of the built-in collapsible type.



In these new settlements the means of providing the necessities and comforts of life are all to be socialized. Such things as the preparation and serving of food, the operation of laundries, baths, house cleaning, etc., are to be centralized and mechanized.

Institutions serving the cultural needs of the population are to occupy an important position. Their use is to grow with the growth of leisure. Leisure on the other hand is to be the direct result of the socialization of the education of children, the freeing of the women from "enslaving" household duties, and the shortening of the hours of labor.

### MECHANIZED CHILDHOOD

Far-reaching changes are proposed in the field of child education and training. Special "infantoriums" are contemplated for infants from 1 to 3 years of age. "Children's cities"—run on a collectivistic basis—are planned for children of pre-school age. "School cities" for young persons from 7 to 18 years of age will provide the rudiments of abstract knowledge supplemented by a ready familiarity with industrial processes and methods obtained through shop work and visits to factories and plants.

Trade and commerce will have no place in the new settlements. It is claimed there will be no need for distributors, middle men or service men. Small stores and shops will disappear. Only such business places will survive as supply individual needs that cannot be satisfied by standardized methods—such, for instance, as shoe shops, underwear stores. There will be no private ownership of automobiles. Each adult, however, will be taught to drive a car.

Such are the cities and the homes of the future in Russia as visualized by some of their leading thinkers.

"Russia may be like that"—but we do not believe that these ideas will have much vogue in other countries. Even the "intelligentsia" of America will hardly find them appealing.

### HOUSING IN RUSSIA TODAY

While the intelligentsia are discussing violently what the Russian home of the future is to be like, striking object lessons are being afforded of what is happening in the Russian home of today, particularly in great centers of population such as Moscow, which has been characterized by competent and experienced observers as the "ant-heap" community of the Socialistic system—due to the extraordinary overcrowding that is to be observed there at the present time.



Moscow was built originally for a population of about 2,000,000 people and while a number of new buildings have been added in the past 4 years, they apparently have in no way been adequate to keep pace with the rapidly increasing population—which today is officially estimated to be between 3,250,000 and 3,500,000, but which one observer thinks would more accurately be put at 4,000,000 people. The statement is made that there is hardly a family in Moscow today which does not harbor at least one unregistered guest during 150 nights a year—notwithstanding that the registration of all visitors or transients is required by law.

It is not uncommon for a Russian family of a husband, wife and 3 children, occupying a room of about 225 square yards, to hospitably welcome an aunt and her son, and perhaps the husband's brother with his wife and child, who have come up from the village and who will visit them for an indefinite period.

Moscow is a great center to which people from all parts of Russia flock. It is said to have a greater lure for the Russian peasant even than New York has for the rest of America.

While Communism has not thus far achieved free rents along with free transportation, free theatres, free clothes and free food, and free everything, rents are extremely low.

It is interesting to find that in a country supposed to be the most democratic in the world, it is the only country in the world where a system of grading rents according to social classes is to be found. In Moscow there are different rent scales for the different classes of citizens.

The lowest rent scale is for manual workers; the next for employees; the next for intellectuals or members of "free professions" as they are called; and so on up to the private business man or employer of labor who in recent years has often paid 10 times more per square yard for the same accommodations than is paid by the worker.

These differentiations in rent charges, however, are gradually disappearing, as the State absorbs the whole labor power and as the more able manual workers or their children move up into "white collar" jobs.

One result of the housing shortage in Moscow has been the serious disfiguration of that city by the ill-considered and inappropriate addition of extra stories to many of the existing buildings. In a number of cases an extra floor, or even two floors, has been built on top of buildings believed to be strong enough to carry the additional load. In doing this, however, little or no attention has been paid to the



architecture or the appearance of the building with the additional floor added, and often the additional floor has no architectural relation to the original structure—with the result that there are now many architectural monstrosities in this old and famous Russian city.

### WHO PAYS FOR IT?

That even under the Five Year Plan—which to the intelligentsia represents the last word in methods of government—taxation is still necessary in Russia is evidenced by the scheme which the authorities in Moscow adopted in 1931 for raising the necessary funds, \$55,000,000, with which to build workers' houses.

In order to secure these funds the Government announced that it would levy a special tax on certain classes in the community, the proceeds of which would be devoted to building working men's houses.

This tax was to fall on only certain classes of employed and employing persons. Agricultural workers, members of the army, navy and police force, students, pensioners and "persons who have received honorary decorations" were to be exempt—at last a use has been found for honorary decorations!

The tax is to be collected three times a year. Those paying it are divided into 5 groups as follows:

- (1) Workers, employees, writers, journalists and scientists;
- (2) Artisans and craftsmen who have no assistants;
- (3) Artisans and craftsmen having not more than 3 assistants;
- (4) Owners of houses; and
- (5) Owners of industrial plants employing labor.

Among these classes all income exceeding 75 rubles a month (about \$37.50) is to be taxed from 12 to 40 rubles; incomes exceeding 250 rubles a month will pay from 30 to 135 rubles; and incomes above 300 rubles will be taxed from 12 to 60%.

Apparently even under the millennium the people must be taxed.

### THE NEW CITIES OF RUSSIA

According to the Soviet press, 49 socialist cities are under construction. Among these are Magnitogorsk in the center of the Ural mineral deposits with a population of 140,000; Novo Kuznetz and Prokopievsk in the Siberian coal basin with 120,000 and 100,000 inhabitants respectively; Seeglovsk with 80,000, Leninsk with 70,000, and Autostroy, where automobiles are being manufactured, with more than 40,000.



## THE HOUSING SHORTAGE ENDS IN PARIS

There is no longer any *crise du logement* in Paris. For the first time in nearly 10 years there are apartments for rent in that city and signs of *Appartements à louer* are now becoming quite as common as in olden times. This is indeed a striking change; for, immediately after the war the housing shortage became extremely acute in Paris and every kind of "racket" was evolved by concierges, tenants and landlords to squeeze the highest price from the prospective tenant.

One agent made a living by acting as intermediary between the prospective tenant and the prospective renter. The concierge of the building always had to receive a very substantial fee. Even the landlord frequently held out for a small bonus. Then there were previous lodgers who threatened not to move after all unless they were taken care of. The favorite scheme, however, was to induce the prospective tenant to buy the furnishings at an exorbitant price. These furnishings were generally valueless. The new tenant, of course, realized that it was simply a method of buying a chance to put a roof over one's head.

Under such a condition of affairs landlords naturally took all the traffic would bear and allowed houses to deteriorate terribly. A new tenant moving into a flat obtained under these difficult conditions often found that the apartment was in a filthy condition and needed complete overhauling—the installation of plumbing, cupboards, kitchen stove, ice box and even new electric wiring. The landlord simply sat tight and refused to do anything. Everything was at the tenant's expense.

This state of affairs came to an end early in 1932. With everybody frantically seeking apartments and ready to pay almost any price, there was a natural stimulation to the building of new apartment houses. These were built largely for the wealthier classes and were equipped with all modern conveniences; and the rents asked were as a rule beyond the purse of the average person.

The municipality, too, commenced to build to meet the housing shortage—building apartments for persons of moderate means, many of them on the sites of the old fortifications which had been demolished. Even these were found to be renting at too high a rent.

Notwithstanding this building activity, rents for moderate priced apartments were much too high and such apartments were very difficult to find up to the end of 1931. But with the beginning of the new year a distinct change took place. The old signs of *Appartements à louer* began to reappear—first, in the more fashionable quarters of the



city and then in others. With the new apartments that had been built a considerable number of vacancies began to exist—first, in the fashionable quarter; later this condition began to spread to other quarters. For many months landlords had refused to advertise vacant apartments because they preferred to have them unoccupied to reducing their rates. Finally, the municipal authorities realized that they were charging too much for reasonably priced apartments and in March announced a general reduction, not only for the old municipal apartments but for the newer buildings built on the site of the old fortifications.

The result has been that it is now possible to move out of moderate priced apartments into newly decorated modern homes without having to pay tribute to a host of parasites. The renting “racket” has come to an end.

## A HOUSE ALL OF GLASS

### IN PARIS

The old proverb about people in glass houses will soon have a new significance if a new type of house which has recently been built in Paris obtains a wide vogue. This house which was recently erected in the center of Paris is being built for a famous surgeon by a French architect, M. Pierre Chareau, who is an ardent believer in the use of new materials and predicts that within a few decades brick and cement will be as obsolete as wood and stone. The glass house replaces an old three story building placed in the court yard of other buildings where the question of adequate light had become so serious that the old structure had been declared unfit for modern use as a residence.

The glass idea has turned this condemned habitation into a palatial home for a famous surgeon and his wife. The surgery and consulting rooms are on the ground floor; the living and reception rooms are on the floors above.

Everything in the house is said to be of glass. The outside walls are of glass, made of non-transparent glass slabs 3 inches in thickness. These are set in large metal frames each of which is tied to the other and all of them are fastened to the steel skeleton of the building so that from the outside the walls have the appearance of a large glass mosaic, while from the inside, the light penetrating through the translucent walls and from the ceiling gives a diffuse effect of slightly greenish color which is said to be both restful and pleasing. At night a series



of electric bulbs hidden behind the steel frame throw rays of light through the glass so that the house will be equally lighted up after the sun sets as it is in the daytime, although there will be no visible lighting fixtures hanging from the ceiling or placed on tables.

Not only are the outside walls of glass, but the partitions, ceilings, doors, floors, bathrooms, kitchen, cupboards and even staircases, every essential part of the building are all of glass; most of it of compressed unpolished Saint Gobain whose strength is said to be greater than that of the best cement and whose power of being molded into thousands of shapes is practically unlimited.

While the building contains windows, they are not provided for the usual purpose of ventilation but solely as a means of giving a view of the outside. For ventilation, air will be pumped into the building and filtered. In other words, the house will be air-conditioned in the modern manner.

A unique feature of the house is a special contrivance which will enable water to be run along the outside walls, thus serving the double purpose of cooling the house in summer and cleaning the glass. In the event of fire, one turn of the faucet will flood the whole outside of the house from top to bottom—a new type, in a manner of speaking, of automatic sprinkler.

The inside walls and partitions made of glass will be kept clean by the mere rub of a sponge. Floors in the winter time will be covered by a thick carpet of solid rubber made of removable squares so as to enable thorough and easy cleaning by a jet of water. All the glass used in the house is unsplinterable so that in case of any violent shock—such as an explosion in the neighborhood or an earthquake—the danger to the building will be less than in a building constructed in the usual fashion.

The cost of this glass house is said to be slightly higher than that of an ordinary house but the advantages are believed to be so great that the Paris municipality may shortly decide to make a large-scale experiment among the poorest and darkest quarters of the town with a building constructed in this fashion.

It will be extremely interesting to observe this new type of construction and to see whether it will really replace “good old brick”. In any event, it is an interesting experiment which will be studied with keen attention by all persons interested in housing.



## A NEW SATELLITE FOR PARIS

### LA BELLE ÉPINE

The Department of the Seine has approved a project for the creation of a city of 25,000 to 30,000 inhabitants 6 kilometers south of Paris to be known as *Belle-Épine*. Unlike the Garden Suburbs built by the Public Housing Office of the Department of the Seine this will be a normal community containing its due proportion of all economic groups—not a colony of working men and low-paid clerks; not, as M. Sellier picturesquely puts it, “a ghetto for *familles nombreuses*”.

In a number of ways it represents an untried policy of partnership between the Departmental government and private enterprise—which must be regarded as an experiment until it has proved itself workable. The Department owned a parcel of 70 hectares in this undeveloped locality. Two private individuals, an architect and a civil servant, had options on 165 hectares adjacent to it on three sides. The scheme calls for the organization of a 6% limited-dividend public utility company with a capital of 10 million francs to acquire, lay out and develop the combined 235 hectares (580 acres) according to an approved plan.

Of the total area, 22.58% (51.50 hectares) reverts to the Department in the form of streets, parks, playgrounds and sites for schools and other public buildings. The Public Housing Office takes over 55 hectares for the construction of working-class housing. The balance will be sold to the general public for building lots.

Restrictions are surprisingly few. There is no zoning for Use, and only two restrictions are imposed on land coverage and height of buildings. The first is that, in all, not more than 60 hectares shall be covered by buildings. Counting out streets and parks, this is a third of the area to be divided into lots. The average is all right, but why permit it to be exceeded? The second limits the cumulative floor space in all buildings (i. e. the sum of the floor space of all stories) to 250 hectares. This means an average just over 4 stories. But the skyscraper at one place may be balanced by 1 and 2-story buildings at another.

The town is expected to be model and modern in every respect. The Department will install a sewer system and construct a trolley line to Paris. The company will construct and maintain streets until they are taken over by the commune and is responsible for securing the provision of water, gas and electricity. In addition to other commitments, the Department will subsidize the company to the extent of some 20



million francs. Some of the expense is to be recovered by assessing benefits on adjacent property owners under a law dating back to 1807. When the development is completed any profit remaining above the stockholders' 6% will be divided equally between the company and the Department of the Seine.

This project met considerable opposition in the General Council of the Seine, but was finally approved in conformity with the report of its Committee on Extension, Planning and Housing as presented by M. Henri Sellier.

EDITH ELMER WOOD

## A NEW GARDEN VILLAGE IN FRANCE

### LE TRAIT-NEAR CAUDEBEC

What seems to be the nearest approach to the English Garden City idea in France has recently been developed near Caudebec, between that city and Rouen on the right bank of the Seine about 60 kilometres from Havre and 28 from Rouen, at the village of Le Trait.

Twenty years ago this was only a small village of 386 inhabitants. In the last twenty years it has grown to a community of 3,000 people made up principally of workers engaged in shipbuilding.

During the War, at the end of the year 1916, because of the great number of vessels that had been sunk by submarines, it was decided to build a new shipyard at this spot on the Seine. The shipbuilding did not come to an end with the War but has continued ever since.

Owing to the wisdom and foresight of the Director of the Company, Dr. Henri Nitot, the needs of the workmen and their families have been provided for in farsighted and intelligent fashion.

The land on both sides of the highway between Rouen and Caudebec was purchased, though with considerable difficulty owing to the number of small holders. In order to buy 350 acres negotiations had to be conducted with over 70 different proprietors, each anxious to secure the best possible price for his lot, no matter how small it was. Having acquired the land, the architects and the engineers of the company laid out a new town. Naturally, the shipyards were on the river. Not far away but easily accessible along the main highway were built the communal buildings, the school, the dance hall, the motion picture theatre, the recreation grounds and the church. And on the slopes of the hill were erected various houses, ranging from the larger dwellings for the managers and foremen to the smaller houses for the workers.



It is thus seen that in developing this community those responsible saw to it that there should not only be adequate places for the workers to live, but that they and their families should have ample social and recreational opportunities. One of the interesting features of this development is the low cost at which the houses were built. Sixteen (16) different types of houses have been constructed. Many of them contain three bedrooms, to be rented where there are several children in the family, while others contain but a single bed-sitting room suitable for old couples. These houses have been built at an average cost of about £170 in striking contrast to houses built at Becontree near London, built about the same time under the Addison Act, which cost £1400 each.

Like many of the War-housing projects in America special communal buildings or dormitories have been erected for the bachelor working men, thus doing away with the necessity of taking lodgers into private homes.

One of the special features of the houses—apparently quite novel in French developments of this kind but almost universal in the United States—is the providing of a large outside porch with each house. This porch or veranda averages about 7 ft. by 6 ft. in size and becomes practically another room when weather conditions permit. The housewife uses it as her laundry and the steam floats away in the open air, without bringing all the moisture and dampness into the house, as usually happens with this domestic occupation. On a wet day the children play under shelter and at the same time have plenty of fresh air, and in the evening the returned worker sits on his porch and smokes his pipe when it gets too dark to cultivate his garden.

It is interesting to find France discovering the American porch just at a time when America seems to be about to abandon it.

In every house where there are several children, there is at least a living room, a bedroom for the parents and separate rooms for the girls and boys, all well provided with windows that open easily.

The rents vary from Frs. 50 a month (about \$2 at the present time) for a house containing a living room, 3 bedrooms, a porch, cellar or storehouse, to Frs. 100 for a much superior type of house, usually occupied by a foreman or skilled mechanic. The cost of these houses is about Frs. 20,000 and the difference between the economic rent and the rent paid is borne by the industry, as is often the case in industrial housing schemes of this character in other countries.

The industry makes itself responsible for the providing of those social and civic services which are essential to any properly developed

community. And has made provision here for health services, for schools for teaching domestic work, for crèches, for recreation buildings, libraries, cooperative societies, singing societies, sporting club, boat club and similar organizations.

A unique and intriguing feature of this development is the scheme by which an allowance is made in the rent for those householders who are competent musicians and who play in either the brass band or the string orchestra. This is the first instance that has come to our attention where an industrial housing development has thus encouraged the musical development of its people. The proprietors of this industry evidently believe that "music hath charms to soothe the savage breast".

That this method of providing healthy and sensible living conditions for the workers of an industry is a sound one has already been demonstrated even in the short time that this community has been going, for there has been a drop in the infantile death rate at Le Trait of 20% as compared with the infantile death rate of the *Département* in which it is located.

We congratulate France upon this fine development which we are sure will have wide-spread influence in that country.

## THE NEW FRENCH TOWN PLANNING ACT

### FOR THE PARIS REGION

It is interesting to learn that at the time when the new English Town and Country Planning Bill was running the gauntlet in Parliament a somewhat similar measure providing for a comprehensive scheme of regional planning for the Paris Region was being enacted by the French Senate and Chamber of Deputies.

The new Act which took effect on May 14th last deals with the planning of the Region around Greater Paris. This Region covers an area with a radius of 35 Kilometers (about 22 miles) from the center of the city which is practically the same as the Greater London Region being studied under Sir Raymond Unwin's direction. It contains 562 communes or separate communities.

It is expected that the cost of making the Regional Plan under this new Act will run to as much as 5,000,000 francs. This cost is not to be met by a private organization, as in New York or in London, or as with any of the great Regional Plans in America; on the contrary, the entire cost is to be borne by the State or central government.



The Regional Plan is to be prepared by a special committee under the Minister of the Interior—a state or government official. The City of Paris and the Department of the Seine,—which is almost coextensive with the City of Paris—are authorized to make loans in order to carry out the Plan when adopted.

Among other things the Act provides for zoning, and prohibits the establishment of any new business of the first or second class in zones that have been reserved for residence purposes in either town planning or extension schemes under earlier Acts.

The Act also protects the existence of non-conforming uses that are already established, but provides that they may not be extended so as to increase in the neighborhood in which they are located a use which in future is outlawed.

From a translation of the new Act in the *Journal of the British Town Planning Institute* for August, 1932, we learn of the following interesting provisions.

In the first place, the new Act provides that the Paris Region—which is defined in the Act—shall be planned in conformity with a regional scheme to be developed under the Act to which all other planning, improvement and extension schemes of individual localities within the Region shall become subordinate.

That the Plan is to be a comprehensive one is realized from the extent of the Region affected, whose boundaries are set forth in the statute. This Region includes the entire Department of the Seine and those Communes in the Departments of the Seine-et-Oise and Seine-et-Marne that are located within a radius of 35 kilometers around Paris, as well as all the Communes of the Department of Oise and those of the Cantons of Creil, Neuilly-en-Thelle, Pont Sainte-Maxence, Senlis and Nanteuil-le-Haudouin.

Under the Act it is required that the Plan shall be drawn up within one year from the date of its publication which would bring the report to May 17th, 1933. The Regional Plan is to be prepared under authority of the Minister of the Interior by what is known as the “Superior Committee on Planning and the General Organization of the Paris Area.” This Committee is constituted as follows under the Act: 6 members of the Senate, 6 members of the Chamber of Deputies, the Vice-President of the Council of State, 4 Councillors of State appointed by the Minister of the Interior; the Prefects of the Departments of Seine-et-Oise, Seine-et-Marne and Oise, or their representatives; 14 General Councillors elected for the period of their term of office—7 from the Department of the Seine, 4 from Seine-et-Oise, 2 from Seine-et-Marne and one from Oise.

It is further provided that 3 at least of the General Councillors from the District of the Seine must represent suburban cantons, while those from the other Departments must be elected from among the representatives of cantons comprised in the Paris Area as defined in the Act.

There are also to be 14 representatives of the communes included in the Region, nominated for the period of their term of office. The Act sets forth in detail how these councillors shall be chosen and the districts they must represent.

In addition, there are to be 40 members appointed for a term of 3 years by the Minister of the Interior from among jurists, officials, town planning experts, technicians and other specially qualified persons. As if this Committee were not large enough, the Act provides that the Committee may "co-opt" or associate with itself Reporters with a vote in the affairs upon which they report, and technical advisers to attend the meetings, and who may speak in an advisory capacity.

A Committee constituted in this fashion would probably find it difficult to function in England or the United States, but undoubtedly it is the kind of Committee which the French system of government and method of political organization expect.

After the Plan has been made it shall be the subject of inquiry in all the Communes of the Region concerned, and referred to the local municipal councils, chambers of commerce, chambers of agriculture, department of health councils, department town planning committees and general councils concerned for their advice on the matter.

When it is approved, an Act shall be passed which shall put it into effect and declare it to be for a public purpose, at the same time prescribing the financial ways and means and measures necessary to carry it out.

The Act further imposes upon those Communes within the Region which were not required to prepare town plans for their districts under earlier statutes, the duty of preparing such local town plans when an order to that effect is made by the Minister of the Interior.

The preservation of the countryside within the Region and the preservation of such forests and open spaces as still remain are covered by the new Act. Woods, forests and parks in the Paris Region of an area exceeding 1 hectare, whether enclosed or not, whether or not contiguous to houses, may not be cleared except on the authorization of the Minister of the Interior after advice of the Superior Committee on the Planning of the Paris Area and the Prefects of the Departments concerned.



From all of which it would seem as if there was to be great activity in town planning matters in the Paris Region.

Whether an effective plan capable of being carried out will result from so vast an undertaking, with what, to American eyes, must seem so intricate and top heavy an organization remains to be seen.

## A REGIONAL PLAN FOR BRUSSELS

Brussels, like Paris, London and New York, is having "growing pains" and is concerned with the planning—not merely of the city itself—but of the whole region around it.

Under a Royal Decree issued about a year ago a Commission has been set up for the study of the problems involved in the planning of the Brussels Region.

The functions of this Commission are to study, inform, direct and conciliate public opinion on the problems involved in the future development of the city itself and the vast zone around it, which covers 34 Communes. The Commission is made up of delegates from these Communes, from the Province and from the State. While serving on this Commission concerned with the larger area, the Communes included within the district will not in any way find their town planning powers or functions superseded.

Among some of the problems likely to occupy the attention of this new Regional Planning Commission may be mentioned the following: The planning of highways through the center of Brussels, which are not now suitable with the increasing motor traffic; the clearance as far as is possible of obstacles which the net work of railways presents to freer interurban communication; the extension of different methods of transport and their unification in a common system; improvements in drainage and the disposal of waste water; and finally a rational and intelligent planning, on an up-to-date model, of those zones capable of transformation into new districts—all of which is to be worked out as part of a comprehensive plan, with due relation to the problems of the different parts of the Region.

Thus a new method of making a Regional Plan for a great center of population is disclosed. In America our Regional Plans are generally made by private organizations; in England by permanent Government officials; in France, as is seen elsewhere in this issue, by a special *ad hoc* State Commission appointed under legislative act; and now we find one set up by Royal Decree.

It is these variations in town planning practice that add to the interest of the subject and give direction to the art and the science of city development.

## GOVERNMENT AID IN BELGIUM

The extent to which the State has aided semi-public and private builders in the task of providing necessary new housing accommodations in Belgium is indicated by the details of this work to be found in the Budget of the Belgium Ministry of Industry, Labor and Social Welfare.

From 1920 to the end of 1928 grants made by the Treasury for this purpose amounted to about 46,000,000 francs (the franc being worth about  $2\frac{3}{4}$  cents at the present time). Of this sum, 32,000,000 francs were in the form of subsidies to the National Society to cover grants it had made to approved local Societies. In addition, the State contributed the sum of 4.2 million francs to the National Housing Society, and to approved local societies 7.6 million francs.

The Government also advanced 421 million francs to the National Society in the form of loans at low rates of interest, charging but 2% per annum, redeemable in 66 years. The Government also paid 52.6 million francs to the Savings Bank in partial repayment of a sum of 240 million francs advanced by it for housing purposes.

It is expected that in the next few years the State will have to meet part of the interest on two loans of 100 and 300 million francs, respectively, raised under its guarantee for the building of low-priced houses. This will represent a new annual burden on the Treasury of more than 10 million francs.

The Subsidies granted by the public authorities to private enterprise during this period have amounted to about 130 million francs. Of this sum, 91 millions consisted of bonuses granted to persons building on their own account; 35.2 millions of bonuses granted to persons purchasing a house built through the National Society and 3 million francs were granted to the fund to help large families to purchase their homes.

In addition to these direct and indirect subsidies, the State, through tax exemption and reduced registration and transfer fees granted to persons building or purchasing houses under certain conditions, has further subsidized housing to the extent of 25 million francs a year in recent years.



Notwithstanding all this activity on the part of the Government, there is still need for continued effort.

According to estimates made two years ago by M. Vinck—a leader in the housing movement in that country—there were then needed living accommodations for 100,000 people in the industrial areas alone.

In recognition of this situation the Belgian Government at that time authorized the issuance of bonds on the public credit to the extent of 300 million francs for the construction of workingmen's houses. These bonds are to be retired at the end of 55 years. Such houses are not rented on an economic basis, however, but considerably below that—the difference being met by the State, the Province and the Commune in the following proportions: five-eighths of the deficit by the State, one-eighth by the Province and two-eighths by the Commune. The majority of the new housing accommodations thus authorized took the form of multiple dwellings rather than single one-family houses.

By the time this plan is fully carried out it is expected that Belgium will have completely eliminated its slums—always assuming, however, that new slums have not grown up in the meantime.

An interesting discussion in French of Belgium's housing problems will be found in the Report laid before the Senate by Senators E. Vinck, Armand Huysmans and H. Lebon on the subject of the Minimum Standard House and the Fight against Slums by the Commune. This Report can be obtained from the Union des Villes, 3 bis rue de Regence, Brussels. Price 20 Belgian francs. The Report is a book of 216 pages and comprises the papers read at conferences on town planning and housing held at Brussels in 1931 by the Union of Belgian Towns and Communes, the opening address on this occasion having been made by H. R. H. The Duke of Brabant.

## A "FLOWERING WILDERNESS"

### IN STOCKHOLM

The City of Stockholm has a unique charity in its Flower Fund and a unique group of buildings, containing many unusual features, which have been erected from that Fund.

The Flower Fund is formed by an organized effort to get the friends and relatives of departed dear ones, in cases where it is requested that "no flowers be sent," to devote a part of the money which would thus have been expended to the Flower Fund. It is estimated that in Stockholm between 30,000,000 and 40,000,000 kronor—between

\$6,000,000 and \$8,000,000—is annually spent on the purchase of wreaths, cut flowers and other floral decorations for funeral and cemetery use.

A part of this vast fund is diverted to this unique and interesting charity known as the Flower Fund, which is said to have an income from the public of about 34,000 kronor, or \$6,800, a year. Since its organization in 1921, its total income from such sources has not been more than 350,000 kronor or \$70,000. Some of this has come from legacies, but the main part which remains pretty constant through good times and bad alike has been given by the friends of persons whose funeral notices have included the words

No flowers. Remember the Flower Fund.

All through Stockholm are scattered the little cards of the Flower Fund which read as follows:

I desire that the words, "No flowers by request. Remember the Flower Fund," shall be inserted in the newspaper notices of my death.

The result is a steady income of thousands of small sums which are far more impressive in their spirit of helpfulness for others than in their amounts.

Through the funds thus secured the Flower Fund has erected 8 large apartment blocks which it now owns, its funds secured from these sources having been supplemented through government and municipal loans.

Two of these apartment groups are in Norrmalm—the best residential quarter in Stockholm. The other 6 groups are in a single erection in the Ringvägen in Södermalm, a part of Stockholm that occupies the same relation to the older or central part that Brooklyn does to Manhattan.

This group in the Ringvägen cost nearly 6,000,000 kronor (or \$1,200,000) to erect. These various apartments are said to be always occupied with a very considerable waiting list. Ordinary rents in Stockholm are rather high and the rents charged at these Flower Fund houses are not only low but also the accommodations and conveniences which the tenants receive there can only be had in the more expensive class of apartments.

This group of buildings has a number of unique features. One of these is a clinic or surgery at which a well-known Stockholm physician attends once a week with a fully qualified nurse on duty all the time.

Central heating is a feature of the buildings and like New York is included in the rent and not charged extra, as it is elsewhere in Stockholm. Instead of requiring the tenants to keep the common stairways



and passageways clean—as is so often the case in most cities and which gives rise to so many disputes between tenants—this service is performed by the management without extra charge.

While private baths are not part of the accommodations furnished, there are communal baths in each group of buildings for the use of which a charge of 50 öre (10 cents) is made. There is also a common laundry. In the Nordic countries habits of living differ very materially from similar conditions of living in the United States. The public baths and the public washhouse are greatly desired by people in these countries, whereas in America they have never been very popular.

The Ringvägen group of apartments is built in separate wings which are connected by underground passageways, with elevators at centrally located points affording access to the apartments on the upper floors.

There are numerous social activities, as is the case with model tenements in the United States. A common room for the tenants is supplied with daily and weekly papers and with a small library. There is also a restaurant where no meal costs more than 1 krona (20 cents). Bakeshops and vegetable and butcher shops are also to be found in each block, as is the case with many of the best American model housing schemes. All of these are run by the Flower Fund and the prices charged are considerably lower than charged in outside shops but there is no obligation on the tenants to use them.

The kitchens of the individual apartments are well equipped with modern labor-saving devices and gadgets.

The projectors of this housing scheme have very rightly limited its use to people for whom it was intended and have solved the problem of preventing such improved housing accommodations from being occupied by a group in the community who are quite able to provide their own housing accommodations at higher rents. In order to accomplish this result, apartments are rented only to tenants having incomes of less than 2400 kronor (\$480) a year. Another rather unusual requirement is that the tenants must not be more than 55 years of age. This condition is imposed to keep the Fund from becoming a scheme for housing the aged destitute, instead of a really independent self-contained series of private apartments for the “white collar class” of the community.

## HOW SWEDEN DOES IT

One of the unique features of housing in Stockholm is to be found in the fact that due to a far-sighted land policy, inaugurated a number of years ago, the town of Stockholm owns at the present time the greater part of its area. This has enabled that city to establish a number of Garden Suburbs laid out with the greatest care and connected with the center of the city by rapid trolley lines. These municipal Garden Suburbs cover some 2,350 acres and at present house a population of over 27,000 people. One of the most notable ones is that known as Enskede, laid out as long ago as 1908.

In none of these is the land sold, but is leased for a period usually of 60 years. At the expiration of this term the lease can be renewed, the former lessee being given a preference. If at the termination of the lease he does not desire to continue to occupy the land, he may ask compensation for the buildings he has erected on it, on a basis definitely laid down in regulations. He is also free at any time to dispose of both the lease of the land and the buildings.

An interesting review of housing in Sweden was published not long ago in the *National Builder* of England, written for that journal by R. Coppock, one of England's leading builders, who reported the results of his visit to Sweden and the observations that he had made with regard to their treatment of their housing problems.

In addition to the usual control of building by by-laws and similar regulatory measures, the State in Sweden makes loans for housing. From as early as 1904 such loans have been made to encourage home ownership—both for agricultural and dwelling purposes.

Since 1909 the State has also established credit organizations for loaning funds on first mortgage for building purposes in towns and communities that are smaller than towns but approach them in their organization and character. This central fund is known as the Town Mortgage Fund of the Kingdom of Sweden. It grants loans to mutually responsible local societies of borrowers, known as Town Mortgage Societies—the equivalent of the Building and Loan Associations of America.

This organization in addition to granting loans for ownership of small homes also grants loans to encourage the building of larger apartment houses. The amount of all loans is limited to 50% of the value—in the four largest towns to 60% of the value. The State thus far has contributed a foundation fund amounting to over 80,000,000 kronor. It appoints a board of directors and auditors and determines



the functions of the board. While strongly represented in this credit organization, it does not control or dominate it nor is the State responsible for the debenture bonds issued for a larger amount than the original capital contributed.

Like other European countries, following the War the Government of Sweden passed Rent Restriction Acts which controlled the maximum rents that might be charged. These enactments first put on the statute books in 1917 came to an end in 1923. With the ending of the control of rents, private enterprise resumed its place in producing new houses, and during the year when rent control came to an end reached a figure higher than that of the year preceding the war, which had been characterized by great building activity.

#### STATE BONUSES AND SUBSIDIES

At the same time when the Rent Restriction Act was passed in 1917 subsidies were granted by the State without any obligation as to repayment or even payment of interest. These were made to meet the difference between the normal cost of building and the increased cost of building due to the War which it was expected would have to be written off when prices fell. Three years later, in 1920, a State Dwellings Loan Fund was established for the purpose of granting credit at low rates of interest to builders. In 1922 the direct subsidy without repayment came to an end, but the granting of loans out of the Dwellings Loan Fund is still part of the state policy and still continues under the direction of an organization known as the State Building Bureau.

These measures have been carried out in close cooperation with the communes or local authorities which have had to distribute the contributions on their own responsibility. During recent years some of the larger cooperative associations and a few home ownership societies have received permission to act as intermediaries for the State in the distribution of such loans.

While the local authorities have carried out a certain amount of direct building activity themselves, the greater part of the money has been allotted by them to private builders—especially builders of small homes—and in recent years to an increasing extent to cooperative building enterprises.

These loans have been made as second mortgages and extend up to 75%, and in some cases even 80%, of the value of the property. They have been made on the assumption that first mortgages have been made and are obtainable in the open market. In recent years the

State grants have come to an end and have been superseded by State loans which must be ultimately paid back and on which interest is charged. Gradually the terms of these loans have been brought to conform to those obtaining in the open market.

From the time when this activity started in 1917 to the end of 1927, 74.8 million kronor had been advanced as loans and 19.6 million kronor granted as State contributions without any obligation of repayment, that is as direct gifts.

With the aid of these subsidies 10,478 separate apartment houses were built, of which 9,306 are owned by the occupants. These apartment buildings contain accommodations for 28,175 families in 83,993 rooms and kitchens, representing a total cost of erection of about 321 million kronor. In order to establish proper standards, standard plans were prepared and issued as a guidance and help to owners building their own homes.

In 1930 it was proposed that the State Dwellings Loan Fund should have its powers and functions extended so as to make second mortgages generally available for apartment houses, cooperative dwelling houses and private dwellings occupied by their owners. It was also contemplated that first mortgage loans up to 75% of the value of the property should be made from this fund where it was not possible to obtain such mortgages in the open market—these loans being primarily intended for small home owners in the suburbs and smaller localities of the state. It was also proposed at that time that the local authorities should so far as might be necessary grant further credits to cooperative building enterprises.

#### THE CO-OPERATIVE MOVEMENT FLOURISHES

In addition to these aids to better housing provided by the State and the local authorities, the cooperative movement has developed very successfully in Sweden. During the war Cooperative Building Societies developed rapidly, especially in Stockholm, and a large number of them were established.

In 1915 a cooperative building undertaking of a kind somewhat different from those theretofore existing, known as the Cooperative Building Society of Stockholm, was established on the initiative of the public authorities of that city. Since that time it has built in Stockholm 848 dwellings, for 1868 families, to the value of 10.5 million kronor. The Society has 1058 members.

Another successful but more recent society is The Tenants Savings Fund and Building Society which works on somewhat different



principles. The Society in Stockholm had built up to October 1st, 1927, 2,450 dwellings for 5,268 families. The members of these cooperative building enterprises are generally working people and the lower paid civil employees but they constitute the better groups of these industrial classes.

The types of dwellings built are primarily those most useful for the working classes in Sweden, consisting of one room and a kitchen or two rooms and a kitchen. Bathrooms or shower baths, as well as central heating are always installed in the buildings erected in recent years and great attention is paid to the accommodations provided. The kitchens are equipped with gas stoves, hot and cold water, sinks and the usual kitchen appliances. The buildings on the whole are considered models of good workmen's dwellings and great pains are taken in the arrangement of gardens around the houses with playgrounds for the children.

The annual rents are generally 25% to 30% lower than those obtaining in the open market. In Stockholm the average rent is 500 kronor for one room and kitchenette; 800 kronor for one room and a kitchen; and 1300 kronor for two rooms and a kitchen. This includes interest on the borrowed money and general overhead and amortization but does not include the cost of heating. In most other Swedish towns rents are from 25% to 30% lower than those that obtain in Stockholm.

In addition to these measures taken to improve housing conditions in Sweden, there has been considerable activity since the war on the part of industry. Many leading industrial enterprises have materially assisted in the establishment of better homes for their own employees and workers—partly by building houses for them, partly by giving financial aid and, to a still larger extent, by financing the building of homes by the employees themselves. Many model villages are to be found throughout the country.

From all of which it is seen that Sweden has perhaps come nearer to the solution of its housing problems than any other country.

## A SLUMLESS COUNTRY

### FINLAND

It is reported that Helsingfors, the capital of Finland, has no slums nor any housing problem.

In 1917 it was faced with the same housing shortage, labor shortage, shortage of building materials and rent restriction difficulties that beset the large cities of other countries.

As early as the 1870's, Public Utility Housing Companies had been established in that city. In 1900 a different kind of Housing Company was inaugurated—the fundamental basis of its policy being that every shareholder, whether well-to-do or working class, should be entitled to accommodation in the Company's houses.

It is this newly evolved system of joint stock general housing company which has revolutionized the building trade in Finland and placed its citizens of all classes—government officials, business people, teachers, army officers, skilled workmen and laborers—in the proud and happy position of owning their own homes, even when those homes are but flats, and at a rent which gets less and less each year.

These joint stock Housing Companies have so completely dominated the building trade that by 1928 they were responsible for 96% of all the housing produced in Helsingfors, while in other towns of Finland they constituted 73% of the year's building activities.

A word may not be inappropriate as to the way in which these Housing Companies are constituted, for they seem to have features different from the ordinary cooperative building society or building and loan association so well known in other countries.

Regulated by a statute passed in 1926 which defines their functions and liabilities, there are three types:

One, the ordinary general housing company whose stockholders have the right to sell their stock at any price they please to whom they please, with no limit on dividends.

In the second group are Public Housing Companies. In these, dividends are limited as is also stock participation. The capital in this second group—which is run by the community for the middle classes and better paid artisans—amounts to from 20% to 25% of the building cost. To such companies the municipality makes loans on mortgage of 30% to 40% of the value.

The third group consists of "Partly Communal" Housing Companies which later become Public Housing Companies as the tenants pay off their stock. The capital for these Companies is loaned by the State and paid back by the tenants whose monthly rent includes part repayment of the stock. When at about the end of 6 years the stock is all paid off, the status of such a company is automatically changed to that of a Housing Company, Limited, with the tenants as stockholders.

A life insurance policy, included in the monthly payments, insures the dwelling to the tenant's family at the same time safeguards the company against loss through the premature removal of the stockholder.



## AMERICAN TRENDS IN HOLLAND

Two trends toward American examples and practices have been noticeable recently in connection with housing in Holland. One of these has been the erection of the first "skyscraper" in the city of Amsterdam—an apartment house 12 stories high which towers 6 stories above the highest apartment dwellings previously built in that country.

Because of the swamps on which the whole city is built, such a "skyscraper" is said to have caused the builders more difficulty than did the Empire State Building to its American engineers.

The new skyscraper is a point of great interest locally and Hollanders are telling each other how on a clear day from the top of this building "one can see as far as Utrecht"—a distance of 15 miles.

Another recent trend in that country has been the turning from the building of houses solely for rent and the encouragement of houses for sale and home ownership. Until recently the housing law contained no provision for encouraging the building of houses to be owned by the occupants. Although 185,000 houses have been built in Holland since 1905 by building societies and municipal authorities, almost all of these were built to rent.

Now the authorities are beginning to realize that there is a very real need for houses which can be purchased and owned by the occupants.

Under the Agricultural Workers Act—which provides for grants of money for the purpose of small holdings by agricultural workers—3,578 plots have been acquired up to the present time. With the help of grants allowed under the housing act various local authorities have adopted other measures for building houses for sale. And the National Housing Council—a general union of building societies—has recently set up a committee to inquire into whether it is desirable and possible for building societies to build houses for sale, instead of concerning themselves solely with renting them.

## THE ONE-FAMILY HOUSE EXPOSITION AT VIENNA

### A COLONY OF "SAMPLE HOUSES"

A unique type of Exposition was opened in Vienna last June under the auspices of the Austrian *Werkbund*. At that time a permanent and tangible housing demonstration was made by the erection of an entire colony of 70 houses. All of these were one-family dwellings, quite modern in their style of construction and in their architecture—

designed by 31 different architects, most of them Viennese with a sprinkling of architects from France, Germany, Holland and Russia.

The site of this permanent demonstration is a wedge shaped piece of land between the Veitinger-Gasse and the Jagdschloss-Gasse. On this site a complete residential colony has been developed.

According to Josef Frank—a Viennese architect who served as Director of Works and Planning of this International Housing Exposition—the colony was built in order to give as many solutions as possible of the problem of the small one-family house.

Mr. Frank in an extremely interesting article very fully illustrated by photographs and house plans, as well as a site plan, in the *Architectural Forum*, for October, 1932, describes the purposes of the scheme as follows:

The *Werkbund* has tried to build the most varied structures and no single model has been put into the foreground, as is so often the case in similar Expositions. The *Werkbund* takes the point of view that different types of people need different types of houses. Later on it may be determined which model has been the most popular. Of course, one will probably never be able to come to a general conclusion as to whether the one-story house or the apartment house best answers our needs. But this is not only impossible—it is also unnecessary. Since the oldest times all kinds of houses have existed, one beside the other, and all kinds of houses probably will go on existing one beside the other for a long time to come.

As he points out, the Exposition is really a collection of “sample houses”. Every exhibit has been planned to serve as a row house and as the basic element for a whole suburban development.

The site on which these houses has been erected belongs to the City of Vienna and the land is not being sold but is simply leased to the buyers of the houses, free of all cost, up to the year 2000. In 2001 the municipality may buy back the use of the land by paying the house-holders the value of the buildings.

In purchasing, 40% of the whole purchase price is required to be paid down as a cash payment. The balance may be paid in monthly installments through a 15-year period.

For each house the cost of construction amounts to about 65 Austrian schillings per cubic meter—which is approximately 27 cents per cubic foot—while the development cost of the land and the establishment of the garden vary in cost between 5,000 and 10,000 Austrian schillings (\$700 to \$1,400).

Each house stands on a lot of 200 square meters (2,150 sq. ft.). A building built on such a limited space necessarily involves rather narrow construction. Row houses predominate. The land is gently



rolling and because of differences in grade it has been necessary to build all houses with cellars. The roads are gently curving.

The settlement has been described by Mr. Frank as follows:

All the houses have been made of the same material in the interest of economy of the whole development, although some were designed for other materials. In order to make the actual work of construction easier, windows, doors and other elements have been, as far as possible, confined to a few types. The walls are made of hollow tile measuring in total thickness about 32 cm. (12.8 in.). That is, two walls 12 cm. each (4.8 in.) are separated by a hollow space of about 8 cm. (3.6 in.). The hollow spaces are filled with wire netting and stucco.

## THE CONSTRUCTION

The roof and floor construction is of wood, except that the first floors above the cellars are of reinforced concrete. To afford protection against the rather severe winds that prevail in winter in Vienna all windows are double frames and like the doors their framework is also of wood.

Entrance doors are covered with tin or with a veneer of asbestos. The floors are of oak, linoleum or rubber; in the kitchens and bathrooms they are of tile or paving plates or composition. Most of the roofs are flat. Those which are not made to be walked on are of wood. Those which may be used as terraces are made of concrete and insulated with asbestos or with gravel. The railings are made of iron.

The staircases in almost all the houses are made of wood. Their incline is 20:23. The rooms are 2.80 meters (9.18 ft.) above ground, so that 14 steps lead to the upper floors. The actual rooms are about 2.50 meters (8.2 ft.) high. On the outside the walls are whitewashed and covered with a waterproof coating. Both gutter pipes and sewers (plumbing pipes) of galvanized sheet iron are on the outside of the houses. To protect the cellars against dampness they have been given an application of asphalt. The cellar windows are made of iron. All wooden and iron parts are lacquered.

## STYLES AND TYPES

The housing programme has been practically the same in all cases. It is the problem of the one-family house of the smallest type which can be built, if need be, as a "series-house" in rows. In ground plan the 2-story houses occupy between 34 and 50 square meters (366 sq. ft. and 538 sq. ft., respectively); the 1-story houses about twice that much. Each comprises a living room, 2 or 3 bedrooms, a kitchen, bath and toilet. In the larger types there is also a room for a maid while some houses have a studio or work-room built as an upper story. The heating apparatus, the laundry and the drying racks are in the basement. The houses are heated by stoves or by central heating arrangements burning coke or oil. The kitchen stoves and all water-heating appliances burn gas.

Narrowly limited as this problem is, it none the less offers many possibilities. Had no general regulations existed, the colony as a whole would have been too heterogeneous. As it is, each of the individual houses is very different from its neighbors. Practice has shown that

but very few general regulations are sufficient in order to secure a general effect of harmony.

The planners of the *Werkbund* contented themselves with demanding smooth plaster, flat roofs and identical garden fences. The uniformity of the roofs is, after all, the main purpose of the flat roofs which are so fashionable nowadays. Their principal factor has been a harmonious architectural effect through a similar treatment of the roof problem. The most dissimilar houses, if they have flat roofs, make a harmonious impression when placed side by side. The flat roof and the fashionable smooth façades are the foundations of our modern style. They make it possible for the contemporary architect to build with the simplest means houses which fit well into their surroundings.

Color has been deftly used in the *Werkbundsiedlung*. Although in shape the houses do differ, their differences do not clash. That is why each house or each group of houses, although it has its own color scheme, has been so attuned to a general color harmony that from whatever place one looks at the colony it fits into the whole. The colors of the doors and windows are in keeping with those of the houses. An effect which is at the same time varied and harmonious has been attained.

Three types of house dominate the colony. The most popular is that of the 2-story dwelling which has living rooms on the lower, and bedrooms on the upper floor. This type probably adopts itself best to small building lots for it requires the least space. A second type has turned over the ground floor to the cellars and has the living rooms above. This type has the advantage that all rooms are equally well lighted, but the disadvantage that one has to descend from the living rooms to the garden by a staircase. This is, of course, not in accordance with the Viennese habits of life. The garden loses its intimate connection with the home.

A third type is the 1-story dwelling which has all the advantages of easier housekeeping on its side, because all mounting and descending of steps can be avoided. There is no doubt about the fact that this is really the ideal home, yet it has the great disadvantage of requiring more building space. The larger roof and the larger foundations make it, naturally, more expensive. It is also best fitted for dry climates only; for, when it stands in a damp region the ground fogs are likely to come into the bedrooms at night making them less healthy. A variation of this 1-story house is the type that has a roof terrace on which are a few working rooms. Indeed, in many of the houses the available living space is enlarged by terraces and roofs on which one can walk.

### ORDERED ANARCHY

On principle, the architects have designed each room with an absolute minimum of furniture. Every effort has been made to keep the small living space from being unnecessarily clogged. Without exception all the cupboards are built in, occupying entire walls or filling niches. The guiding principle for the selection of furniture to be placed freely about the rooms has been that of complete lack of principle. Everywhere things have been so arranged that not one room should be uniformly furnished. Nowhere the same kind of wood or chintz has been used throughout. Thus it is possible to introduce new things anywhere, to put in new chintzes anywhere or to hang pictures



anywhere. At all times it is possible to exchange any object or to complete the furniture however desired. It goes without saying that the furnishing has had to be as inexpensive as possible and that generally, therefore, factory products have had to be used.

Thus while great stress has been put on outward uniformity, so as to bring about a harmonious outward impression, yet in the interior the exactly contrary principle has come into force since here there was no need of uniformity. Everyone is to live according to his own personal taste within his own four walls and to give his home its own character without being in the least dependent upon the demands of style or formality.

It will be interesting to see which of these various types of houses have the strongest appeal for the people of Vienna. None would prove attractive to American dwellers in our opinion.

### MORE MODEL HOUSES IN GENOA

That fine institution, the Institute for the Construction of People's Houses (*Instituto per le Case Popolari*), has recently constructed some new workmen's dwellings in the outskirts of Genoa.

These institutes for better housing throughout Italy are largely supported by public funds—in this case with funds supplied by the municipality of Genoa, which still controls and supervises the management. It is a sort of Public Utility Society operating for the local authorities. This particular Institute which was founded in 1907 has a paid-in capital of 15,136,600 lire (\$792,507) and had assets at the end of 1928 that amounted to 110,000,442 lire (\$5,759,293).

During 1928, according to a Consular Report received in this country, the Institute constructed new buildings of different types containing 10,300 rooms, in addition to supervising many more rooms in buildings erected directly by the local authorities in Genoa. All the new accommodations completed during that year were sold or rented long before the buildings were completed, the Society having a waiting list at one time of 2,500 persons.

With a loan of 50,000,000 lire (\$2,617,850) obtained from the savings bank in Genoa, the Society is carrying on an extensive building programme. 20,000,000 lire of this fund have been used in the construction of a new residential development in the suburbs of Genoa in the Valle del Vento at Marassi on land already owned by the Institute covering an area of 60,000 square meters.

A feature of this development which marks a departure from the methods employed heretofore in Italy was the holding of a competition among Italian architects under the auspices of the Mayor of Genoa for

the best type of development for the new community with emphasis upon the city planning aspects of the scheme. The apartments to be built in this new colony contain 2,200 rooms. These are found in 75 separate buildings, none of which is more than 3 stories in height nor with more than 6 families to each house. This is a very distinct departure from the practice that has heretofore prevailed throughout Italy of building large block buildings often 5 and 6 stories in height.

The apartments are to be cooperative and will be sold in small groups—either for cash or on the installment plan—25% of the purchase price being required as a down payment, the remainder to be paid in small monthly sums through a period of 20 years.

Each house is to be surrounded by a small garden and supplied with every modern convenience and yet at the same time will be economical, healthy and comfortable in every way.

Another 15,000,000 lire of the loan obtained from the Genoa savings bank is to be used for the construction of the more usual type of apartment house in block dwelling form for the lower paid workers, to be rented at a nominal rate, just sufficient to cover the administration, up-keep and amortization and interest on the loan. The remaining 15,000,000 lire will be employed in the construction of a still different class of buildings where the accommodations and conveniences will be kept of the very simplest type, so as to make the rents come within the means of the lowest paid workers, at the same time having the houses sanitary in every way.

In addition to this development at Valle del Vento, a better class residential community more on the lines of a Garden Village, will be built in the near future near the sea at Nervi.

## A NEW DEVELOPMENT AT ROME

The *Istituto per le Case Popolari* of Rome, a similar organization, which has done splendid work in providing workingmen's dwellings in that city, under the leadership of Deputy Alberto Calzabini, a distinguished architect, has recently constructed a complete new suburb for Roman workingmen. This is located near the Basilica of St. Paul Outside the Walls and is said to mark the best work of the kind that has heretofore been done in Rome.

The first houses built in this new colony were rather plain and somewhat ugly and were evidently intended merely to put roofs over the workingmen's heads. Gradually, however, as more houses have been built, the style of architecture has greatly improved until the most re-



cent dwellings are said to be of very excellent design and attractive appearance—notwithstanding that some of the poorest people in Rome are to live there.

## AN ANCIENT SKYSCRAPER COMES TO LIGHT

We have known for a long time that the nearest prototypes of New York's tall tenements as they are found today were the houses built in Nero's time in ancient Rome. Evidence of that is to be found in the early Latin writers whose descriptions of that civilization have come down to us. Seventy feet was the height limit in ancient Rome under the building laws which prevailed in Nero's time.

Recent excavations in Rome have now brought to light a 7-story apartment house—or rather the ruins of one. Near the Capitol recent excavations have disclosed the ruins of a number of 7-story apartment buildings. On the ground floor of these ancient buildings there were stores. On the second and third floors were de luxe apartments with balconies, while above were cheaper apartments which commanded lower rents because of the absence of elevators. One staircase sufficed for all tenants. The houses were built of brick with pilasters of stone and in some cases marble pillars supported the balconies.

The ruins recently uncovered were of apartment houses located at the center of the city, at the foot of the stairs leading to the Capitol—only a few feet from the Forum.

## HOUSING THE MADAM BUTTERFLIES

The housing of workers by employers of labor has much to commend itself to the student of housing.

While the "tied" house has its draw-backs and employer-housing unless wisely managed can have serious disadvantages, it is on the whole a wise and intelligent provision for employers to make in order to insure a contented and sure labor supply. Under normal conditions, excepting in great centers of population, we know of nothing so likely to reduce labor turn-over as the providing of proper homes and home conditions—including under that term much that goes to make life desirable.

What is probably a unique system in the housing of factory workers is the system in vogue in the textile industry in Japan.

In this industry, according to a Report\* made by the U. S. Bureau of Labor Statistics, the latest available official figures show that in 1928

out of 55,041 regulated factories employing 1,869,668 workers, there were 14,115 factories having dormitories housing 33% of the total workers in regulated factories—498,184 women workers and 117,213 male employees. Nearly half of these were factories in the textile industry and more than 80% of the workers thus housed in dormitories are women or rather girls. Of all the workers housed in dormitories 90% are employed in textile factories. Of textile workers housed in dormitories 99% are women.

We know of no system like this anywhere else in the world.

Here in Japan in one industry over 200,000 women workers under 16 years of age are housed in communal buildings. How young these workers are is not disclosed.

According to the Report made by the U. S. Bureau of Labor Statistics, the young girls and women who are employed in this industry stand in special need of legislative protection because each girl in the dormitory is necessarily cut off from family and friends. It is also stated that the average employer prefers girls who thus "live-in", rather than girls living outside, for various reasons—one of which is that their attendance at work is much more certain and the resultant amount of labor turn-over is much less.

The girl who lives in an employer's dormitory is much less likely to be absent from work on account of personal convenience, domestic affairs, festivals, slight illnesses, new cinemas, and similar reasons. Such girls can also be employed to the maximum legal limit of hours and their labor can be arranged in shifts both day and night—all of which is impossible with workers who live outside of the factory.

For this reason most of the workers in the textile industry in Japan are workers who live in.

In the spinning industry, where modernized large-scale factories prevail, model dormitories with modern facilities are found. But in the smaller factories in the weaving and silk-reeling industries there are still many dormitories which are said to be inadequate from the point of view of sanitation, safety and moral conditions.

### THE TYPICAL DORMITORY

The types of architecture are quite varied. Some factories have separate buildings for this purpose. Others use part of the workshop or a second floor as a dormitory—the first floor being used as the occupier's residence or office.

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\* *Bulletin U. S. Bureau of Labor Statistics, No. 558, Nov., 1931.*



Generally, however, the dormitories are Japanese wooden houses of 1, 2 or 3 stories—mostly 2 stories. The interior of the house is floored with *tatami* or thick and straw-padded Japanese matting, on which the workers sit during their rest times and upon which they spread their beds at night.

In the case of the smaller establishments which predominate in the silk-reeling industry, poor dormitories are the rule rather than the exception. Such dormitories use the second floor of the work shop or garretlike sleeping quarters without a ceiling and without outside doors, or what the Japanese call *amado* and without closets.

The rooms are often dark and badly ventilated, badly lighted and over-crowded. In the poorer factories there are often found 20-mat dormitory rooms, each mat 3 by 6 feet, the dormitory arranged for 20 occupants in a space of not over 360 square feet, lighted by a single 10-watt lamp. This is not sufficient for the protection of the workers' eyesight or for the encouragement of healthful recreational or educational use of leisure time where facilities other than the dormitory are not provided.

In an official investigation of dormitory facilities made by the Japanese Bureau of Social Affairs in 1926, covering 4,804 dormitories in textile factories, nearly half were found without a ceiling—only rafters for shelter—and more than a quarter of them were without a window and had no outside door protection. Nearly half were without closets or private wardrobes for personal belongings and bedding. One third, over 1,600, provided only one mat for two persons with one cover of the single size.

In a similar investigation made in 1919 by the Department of Agriculture and Commerce it was disclosed that "In most factories workers who sleep alone are only those who bring their own beds. All others sleep double". Even where a factory does provide single beds, bedding is used by several persons in common. The use of white sheets is very rare; even washable coverings for the upper part of the quilt are seldom found.

For sanitary reasons it has been found absolutely necessary to wash the bedding and to expose it to sunlight from time to time and have quilts at least partly covered by washable material. But in the dormitories these safeguards are rarely found.

It is the view of their medical practitioner that such conditions obviously provide the first and most direct medium for the spreading of disease, especially tuberculosis.

This investigation, made in 1919, by the Government, showed that the average size of the dormitory room was  $15\frac{1}{2}$  *tsubo* (one *tsubo* equals 3.95369 square yards) and that the largest were 405 *tsubo* and the smallest  $1\frac{1}{2}$  *tsubo*. The maximum accommodation in one room was found to be 708 girls, the average 24, and the minimum 2. The average floor space per person was about one mat or 18 square feet. In Japan houses are generally measured by the number of mats to the room. For example, one mat is 3 feet wide and 6 feet long, so that a room of the dimension of 10 *tsubo* is a 20-mat room. Thus a 10-*tsubo* room will accommodate 20 people.

### FREE BATHS

Where there are these dormitories the factories as a rule provide free bathing facilities for the employees, as well as for those who live in their own homes and those who live in company-owned houses. If the factory has no bathing facilities of its own, free bathing tickets to public bathhouses are provided by the industry. While the larger factories have separate bath houses for men and women the smaller ones usually provide only a common bathhouse. The statistics for one district, that of Nagano, for the years 1921 and 1922 showed that in only one-fourth of 600 factories were separate bathing facilities provided on an adequate scale. For the remaining three-fourths there were only facilities used in common.

In addition to providing dormitories for the workers to sleep and live in, many of the factories in the textile industry also have dining rooms where the employees are fed. With the exception of the well equipped dining room of the big factories, the average dining room in the textile industry dormitories is generally floored with wood and covered with very thin matting on which the employees sit,—or even sometimes the surface of the floor is of earth or concrete or brick, which may be washed.

The method of serving the meal varies. In some factories the employees are allowed to sit down. In other factories they stand while they eat. In very few has the custom been adopted of sitting on chairs. The Japanese, however, do not as a rule sit on chairs but generally sit directly on the floor or on cushions or mats. In the case where the meals are eaten in the Japanese fashion, sitting on the floor, it is often without table or tray—the dishes being placed on the floor and the employees crowd about them and eat in much haste.

With this dormitory system in vogue it is natural that laws should have been passed regulating the conditions in such dormitories and



attempting to provide for their occupants such protection from a sanitary and moral point of view as laws can afford.

There may be a similar system of housing its single employees by industries in other countries, but we have yet to learn of anything that quite approaches this Japanese method.

## THE AMERICAN HOME IN THE 1930 CENSUS

The 1930 Census of the United States is completing the publication of its data about homes and families. It contains several new classes of facts, some of which are quite exciting. Especially interesting are the figures on rents of rented homes and values of owned homes. These ought to be decidedly helpful in connection with large-scale housing plans since they show what rentals people are actually paying which is, in the long run, not very different from what they are able to pay.

Of the 10,503,386 owned non-farm homes in the United States, the median value is \$4778—18.1% being valued under \$2000; 33.4% between \$2000 and \$5000; 31.3% from \$5000 to \$10,000; and 15.2% \$10,000 or over.

Of the 12,351,549 rented non-farm homes, the median rent is \$27.15—34% being under \$20; 46.4% \$20 to \$50; 14.9% between \$50 and \$100; and 2.1% \$100 or over.

The figures are given by states; they vary widely. The median rent in three southern states is under \$10, while in the state of New York it is \$41.94 and for Illinois, Michigan and New Jersey in the high thirties.

Turning to New York City we find a spectacular increase in home ownership from 12.6% in 1920 to 20.2 in 1930. The foreclosure rate is not indicated. Owned homes valued under \$5000 represent only 5.8% of the total. The class of \$5000 and under \$7500 account for 20%, \$7500 and under \$10,000 for 21.7%. Among rentals 6.3% are under \$20. It sounds like a small percentage but it means over 85,000 families. From \$20 to \$29 is paid by 14.2% of families; from \$30 to \$49 by 34%. This is the largest group numbering over 460,000. From \$50 to \$74 is paid by 28.4% of families and from that point numbers dwindle rapidly. Figures are also given by borough, Manhattan has the sharpest contrasts—extremes of wealth and poverty. Thus, 31.1% of her families pay less than \$30 a month rent, whereas for the city the figure is only 20.5%; and 22% pay \$75 and over in Manhattan, against 14% for the city.

These figures tend to confirm to the reflective mind what was already strongly suspected—viz., that New York rents in many if not most cases strain family budgets. For no one should be asked to spend more than a week's wage for a month's rent, and it is reasonably certain that even in times of normal employment a third of New York families\* would have weekly incomes of \$30 and under, and another third between \$30 and \$50. The immediate practical bearing of this is that aside from quality—in which we know it fails lamentably for the lower income groups—private business enterprise is not furnishing New York families with a sufficient supply of rentals under \$50. Those offered under the State Board of Housing should be recognized as responding to a public need. Flats renting under \$30 in New York are with few exceptions ripe for slum clearance. But that is another story.

### PHILADELPHIA A STRIKING CONTRAST

Philadelphia offers a contrast to New York in many ways. For a large city it has a remarkably high percentage of home ownership. A trifle over half of Philadelphia families owned their homes in 1930. As in New York, there has been rapid increase in ownership since 1920 (from 38.8%); and as in New York not all of it represents wholesome growth. The most startling difference is in the value of owned homes. In Philadelphia 10.3% of owned homes are valued at less than \$3000; 29.1% from \$3000 to \$4999; and 34.8% from \$5000 to \$7499. Thus it is seen that the proportion of low-cost homes among owned homes is nearly 3 times as great in Philadelphia as in New York—thus making possible a much wider spread of home ownership through the middle economic third of the population.

Of rentals, 11.2% are under \$20; 22.9% between \$20 and \$29 (almost exactly one-third under \$30); and 44.4% in the class \$30 to \$49. The Cawl survey in 1928 indicated that almost exactly three-fourths of Philadelphia families had incomes under \$3000 and nearly half under \$2000. It would seem that for Philadelphia families there is a much sounder relation between income and rent than there is in New York. This is not to say that the standard offered at the lower rentals does not leave much to be desired.

From the wealth of new material at hand let us take a smaller city in the same general region—Trenton, for instance. Home ownership there is high—53.6% (37.8% in 1920). Only a slightly higher percentage of owned houses are valued under \$3000 than in Philadelphia

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\* Unfortunately, there is no authentic information available anywhere as to family incomes in the U. S. A.—Editor.



(14.6%); 31.1% run from \$3000 to \$4999; and 28.5% from \$5000 to \$7499. By a curious coincidence in both cities 74.2% of owned homes are valued at less than \$7500.

Trenton rents run less than in the big cities but not so much less than Philadelphia's as might be anticipated. Only 15.2% are under \$20; 34.7% are between \$20 and \$29; and 35.5% are from \$30 to \$49. Altogether, 85.4% of rents are under \$50. No figures are available as to Trenton incomes. They would average lower than in Philadelphia. The relation of rental to income is probably fairly normal. Here as elsewhere, of course, the Census figures tell nothing in respect to the quality of the housing offered at the several price levels.

#### THE ONE-FAMILY HOME FOR THREE-FOURTHS OF OUR PEOPLE

In addition to rents and home values another important housing item has been added to the 1930 Census—the classification of dwellings as one-family, two-family and multi-family; and of families according to the type of dwelling they live in. In spite of the inroads made by the apartment house since the War, 76.4% of all American families still live in one-family dwellings; 11.6% in two-family dwellings; and only 12.1% in multi-family dwellings. Of urban families, 63.3% live in one-family houses and 20.2% in multi-family houses. This analysis of all dwellings makes a useful supplement to the building permit figures for new construction which the Bureau of Labor Statistics has been giving us, which got everybody worried a few years ago over the trend toward apartment houses. The curve turned back after 1928, and a little later the country got worse things to worry about.

Home ownership, home values and rents are further classified by color and nativity of head of family. The percentage of ownership for all families was 46.8; that for native whites of native parentage 48; foreign and mixed parentage 51.6; foreign born 51.8; and Negro 23.9. That the highest percentage is among the foreign born is worthy of note.

The 1920 Census inaugurated and the 1930 Census continued certain *disjecta membra* of information concerning farm homes. Do they have water piped into the house? And do they have electric lights? In 1920, 10% of all farm homes reporting had water and 7% were lighted either by gas or electricity. By 1930 there had been progress. Water was piped into 15.8% of homes and 13.4% were lighted by electricity. There are wide variations between the states. Massachusetts had 74.5% of her farm homes piped for water and 62.6% provided with electric lights. California was a little lower as to water and a little higher as

to electricity. At the other extreme are Arkansas with 1.5% of her farm homes piped for water and Mississippi where 1.5% are furnished with electric light, each being a bit higher in the other item. Homes with telephones run from 84.2% in Iowa to 3.8% in Louisiana.

A new inquiry in the 1930 Census was whether the family had a radio. There is a certain social and psychological interest in learning that 48.1% of families in Pennsylvania and 45.9% in Delaware had radios, and the relative frequency among urban and rural, native white, foreign born and Negro families. So there would be in knowing how often they attend the movies. But its main importance is obviously for radio dealers.

Ours is still very nearly the only civilized nation in the world which does not use its census to discover the amount and location of room overcrowding in the housing of its people.

EDITH ELMER WOOD

## HOUSING AND THE IRISH CENSUS

Leaders in the housing movement in the United States have long complained of the absence of accurate information on the subject and have resented the failure of our public officials to gather facts in each decennial Census that will let the United States know how the people throughout the country live, and thus be able to check unwise tendencies as they develop.

This has recently been borne in upon us with renewed emphasis by the splendid and notable presentation of this subject by the public officials of Ireland in their volume on Housing as disclosed by the Census\* of Population of that country taken in 1926 and published in 1929.

It is indeed humiliating to find this vast armory of facts as to housing and living conditions in the Irish Free State, and then to compare these facts with the meagre information furnished by the Census of the United States. It is particularly exasperating—for, after all, both countries are governed by the Irish!

In this report based on the facts gathered in the Irish Census of 1926 from information which the head of each household was required to fill out on his Census schedule, the housing conditions of all persons

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\* *Census of Population—Irish Free State—Volume IV—Housing—Compiled by Department of Industry and Commerce, 1929—Dublin—published by the Stationery Office—Price 2s, 3d net—248 pp.*

in private families are set forth. This covers 94% of the whole population of the Free State. The only persons excluded were persons residing in institutions or in hotels or in boarding houses containing three or more boarders.

In order to make the facts brought out by this Census comparable with such facts as are available in the United States and elsewhere, it is important to carefully distinguish the terms used in the Report. These have been rather precisely defined by the public authorities. For instance the term "family" includes all persons residing in the family-dwelling on a given date, including servants—this date being April 18th, 1926.

The term "dwelling" as used in the Census and in this Report means a single room or group of rooms occupied by the family—whether or not these rooms are separated from the rooms of other families. Thus, one house may contain many "dwellings." The one-room tenement is referred to as a one-room dwelling. That difficult item to define, "room," includes bedrooms, sitting rooms, and kitchens, but excludes bathrooms, sculleries and similar places.

Out of a population of 2,971,992 people in the Irish Free State, the Census covered 2,790,581 persons living in private families. Of these, 140,061, or 5%, were found living in 1-room dwellings; 440,131, or 15.8%, were found living in 2-room dwellings; 793,075, or 28.4%, in 3 rooms; 623,001, or 22.3% in 4 rooms; 289,228, or 10.4%, in 5 rooms; 195,188, or 7%, in 6 rooms; and 309,897, or 11.1%, in 7 rooms or more.

As to over-crowding. Out of a total of 2,790,581 persons living in private families, it was found that 580,382 persons, or 20.8%, were living less than 1 person to the room; 702,830, or 25.2%, were living 1 person, but less than 1½ persons, to a room; 428,522, or 15.4%, were living 1½ persons to the room; 275,976, or 9.9%, were living 2 persons per room; 336,215, or 12% were living more than 2 persons, but less than 3 persons, per room; 239,671, or 8.6%, were living 3 persons, but not 4 persons, per room; 184,216, or 6.6%, were living 4 or more persons per room.

The 3-room dwelling is the type most used. This is true for each sized family—from those with only 2 persons in the family to those with 11 persons. The size of the dwelling is largely determined by the family's social status and not by the number of members of the family. More than one-fourth (25%) of the population live in 3-room dwellings, Two-thirds (66%) live in 2-room, 3-room or 4-room dwellings.



A family of 5 persons is the most usual size of family in each size of dwelling—from 2-room dwellings to 9-room ones.

### ROOM OVERCROWDING

As to the extent of room-overcrowding—taking the commonly accepted yardstick that families having more than 2 persons to a room are considered to be “over-crowded”—it is disclosed that 75.2% of the persons living in 1-room dwellings; 59.3% of those living in 2-room dwellings; 36.9% of those in 3-room dwellings; and 17.2% of those living in 4-room dwellings can be said to be “overcrowded.” The percentage living in larger dwellings was negligible.

Viewing the facts from the point of view other than one of percentages and considering the definite figures, the Report shows that 24,849 persons in the Irish Free State, living in 2,761 families with 9 persons in each, resided in 2-room dwellings. Each of these 2,761 families should have had a 5-room dwelling in order to avoid the charge of being “over-crowded.”

The Report discloses that there were 22,915 families living in “over-crowded” conditions in 1-room dwellings. 13,121 of these should have had 2 rooms; and 6,665 should have had 3 rooms in order to escape the charge of being “over-crowded.”

There were 39,615 families living in 2 rooms. 22,576 of these should each have had 3 rooms to live in; 11,844 should have had 4 rooms; 4,325—5 rooms, etc., to avoid being considered “over-crowded.” There were 10,820 families each with 4 rooms; 8,366 of these should each have had 5 rooms; and the remaining 2,454 should have had 6 rooms in order to escape this charge.

How valuable the Report is, is disclosed when it is stated that facts like those just given will be found set forth in tabular form for many areas, down to towns as small as ones containing 1500 inhabitants. They are even available for towns with only 500 inhabitants.

### IRELAND AND SCOTLAND

The Report publishes comparative statistics of over-crowding—comparing conditions in the Irish Free State with conditions in Wales, England and Scotland. The figures in the Irish Free State are based on the 1926 Census, while those for England, Scotland and Wales are based on the 1921 Census, five years earlier. The facts thus disclosed show that over-crowding was less prevalent in Ireland than in any of the other countries of the British Isles—the percentage of the popu-

lation in private families living in dwellings with more than 2 persons to a room being 27.2% in all of Southern Ireland as compared with 43.3% in Scotland.

Going into this subject a little more in detail, the Report shows that in Ireland there were 12% of the people in private families living more than 2 to the room, but not 3 to the room, as compared with 13% in Scotland; that in Southern Ireland there were but 8.6% living over 3, but not 4, persons to the room, as compared with 15.8% in Scotland; that there were there but 6.6% of people living 4 or more to the room as compared with 14.5% in Scotland. As viewed from the question of more than 2 per room, the definition of "over-crowding," there were but 27.2% of the population thus living in Ireland as compared with 43.3% in Scotland. The Report publishes similar figures contrasting conditions in Dublin and Glasgow. From which the Report concludes that housing conditions in the Irish Free State are far better than in Scotland.

Beside these detailed figures of "over-crowding," the Report contains interesting and valuable facts with regard to conditions in rural and urban areas—contrasting the two. It is interesting to note that the housing in the towns, other than the county boroughs, is found to be better than in the rural areas. All along the western seaboard and in the Counties of Dublin and Kildare the rural population are most over-crowded. In Mayo, Donegal and Kerry housing was found much worse than in any other county. Wexford stands out with the best housing. The Report shows striking contrasts in housing conditions between neighboring counties, particularly between Mayo and Sligo; Kerry and Cork; Meath and Dublin.

The Report gives practically every important fact with regard to the housing of the Irish people—ranging from the size of dwelling, differentiating between town and country, the different counties, boroughs and cities—the average number of rooms in dwellings, the relation to death rates, the variations of death rate in rural and urban areas, the facts with regard to children of different ages, and the child death rate, as well as the housing condition of persons according to their different occupations or employment, sex, marital relation, &c.

We regret that it is not possible to go into further details of this most interesting and valuable Report. We commend it heartily to all students of housing and urge them to obtain a copy of this important document from the Department of Industry and Commerce at Dublin.

## HOUSING AND THE GERMAN CENSUS

Interesting facts with regard to housing conditions in Germany are disclosed by the data resulting from the Housing Census taken in May, 1927, published by the Official Statistical Office in the form of two volumes of 500 pages of text, with numerous diagrams and tables.

This census concerned itself with communities having a population of over 5,000 inhabitants and discloses in such communities throughout Germany a total of 8,700,000 dwellings, containing 33,200,000 people. The average number of persons per room was found to be less than one, viz., 0.9, including kitchens as rooms. A greater density of occupancy was found where the apartments were of few rooms.

Taking as a standard of overcrowding, occupancy by more than 2 persons of one room, it is pointed out that 490,000 apartments or 5.6% of the number covered by the census, were found to be overcrowded. In these apartments 3,200,000 people were living—9.6% of all the inhabitants covered by the census. More than half of the overcrowded dwellings consisted of 1 or 2 rooms. Small apartments—1 to 3 rooms—constituted 89% of the overcrowded dwellings.

The returns showed that more than 2 to 3 persons in some cases were living in one room; in 70,000 apartments there were more than 3 to 4 persons per room; in 18,000 apartments there were between 4 and 5 people to each room; and in 9,000 apartments there were more than 5 persons living in a single room. Of the total of 27,000 apartments containing more than 4 persons in one room and their 189,000 inhabitants, 73% of the apartments, containing 60% of the inhabitants, were found in dwellings containing but a single room. And 25% of the apartments, containing 35% of the inhabitants, were found in apartments of but 2 rooms. From which it is seen that the extent of greatest overcrowding is found in those apartments containing but one or two rooms.

One striking fact disclosed by this census is that the average density of population was greater in new apartments, viz., those erected after July 1, 1918, than in the older ones.

With regard to the geographical distribution of overcrowding it was found that of the total of 490,000 overcrowded apartments more than half (roughly 270,000) were in Silesia, Eastern Prussia and Pomerania. These districts contain the highest percentage of small apartments. Upper Silesia also shows the highest birth rate.

Among the large cities, the city of Hindenburg in Upper Silesia had the highest density. Here more than two-fifths of the inhabitants live in overcrowded rooms. After the Eastern large towns the towns in



Rhineland-Westphalia have the largest number of overcrowded apartments. Here the birth rate is also high.

If the figures alone are considered, Berlin stands at the head among all other large cities with 61,000 overcrowded apartments. This, however, represents but 5% of the total of apartments in Berlin; whereas the 7,000 overcrowded apartments of Gelsenkirchen represent 15.4% of all the dwellings in that town.

Generally speaking, in the small and medium sized towns the overcrowding of dwellings was greater than in the large cities.

One of the most striking and significant facts disclosed by this census is the tremendous extent to which the people in Germany live in multiple dwellings and how few, comparatively, live in individual small houses. Out of the 8,000,000 and more families covered by the census, but 700,000 appear to be living in what may be described as undivided private houses—that is in single family houses. The enormous remainder of over 7,000,000 families are found in multiple dwellings of various types—chiefly situated in the larger towns—with tenements predominating to the greatest extent in the Eastern provinces. In the small towns of Upper Silesia 54% of the habitable buildings contain more than 2 families each, while in similar towns in the Rhineland the proportion of such buildings is 17%. There has been, however, a change in recent years—a trend away from the large multiple dwelling and toward the small private house, except in the great cities where the large *siedlungs* tend naturally to the use of the block building.

Another interesting fact brought out by this census is that the average number of persons in a German family in 1927 was 3.81.

One of the most striking facts disclosed by the census is the tremendous number of people living as lodgers in other families. Great importance is rightly attached to this aspect of the housing situation by those responsible for the preparation of the census volumes and the situation is analyzed in great detail.

The Census Report shows that in 1927 approximately 1,000,000 German families were living as lodgers and that one-quarter of this number were sharing dwellings containing not more than 3 rooms.

The Report adds greatly to our knowledge of conditions in Germany.

## IRELAND'S NEW HOUSING ACT

About a year ago the Irish Free State enacted a comprehensive housing and slum clearance law amending the earlier statutes and pro-

viding a comprehensive scheme for dealing with the housing problem.

While the emphasis of the new Act is upon slum clearance, and in its general lines follows the English slum clearance act of 1920, the Act goes much further than this and is really a comprehensive and complete housing law, as will be seen by a reference to its title.

This states that the Act is "an Act to make better provision for the clearance of unhealthy areas and the repair and demolition of insanitary houses; to amend the Housing of the Working Classes (Ireland) Acts 1890 to 1921; the Laborers (Ireland) Acts, 1883 to 1930; the Small Dwellings Acquisition (Ireland) Acts of 1899 and 1919; and the Housing Acts, 1925 to 1930; and to make further provision for the financial assistance of local authorities and others in the provision of housing accommodation under those enactments."

The Act is divided into 8 parts, as follows:

Part I—Preliminary and General,—Definitions—Repeal, etc.; Part II—Unhealthy Areas—Clearance Areas, Improvement Areas, etc.; Part III—Unhealthy Dwelling Houses; Part IV—Miscellaneous Amendments of the Law Relating to Housing of the Working Classes; Part V—Laborer's Cottages; Part VI—Acquisition of Small Dwellings; Part VII—Amendments of the Housing Acts; Part VIII—Financial Provisions, including tax exemption on small dwellings and State Contributions and subsidies.

General Richard Mulcahy, at that time Minister for Local Government and Public Health, in a speech explaining the Bill on its Second Reading in the Dail (Chamber of Deputies) outlined the general purpose of the measure and pointed out in considerable detail its necessity and what was expected to result from it.

On this occasion he said in part:

From the middle of the nineteenth century it became recognized gradually that it was a proper function of the local authorities to organize and subsidise the building of houses for the poorly paid classes of workers in urban areas, and especially for the lowest paid workers whose houses were overcrowded and insanitary. In our cities a huge amount of work remains to be done. In our small and urban districts when we compare the rehousing necessary with the financial resources of the urban districts the work before them is comparatively large.

There is now a widespread appreciation of the primary and urgent importance of this problem. It is realized that not only can there be no relaxation of endeavor but that the continued existence of homes in slums has become intolerable. The advancing knowledge of the essentials of public health is adding day by day to this realization. Apart from that, our obligations are pressing upon us all to do all we can to provide at least modest homes for Christian families.

It has been pointed out that the Government policy of accelerating the erection of houses since 1922 has in effect improved the housing conditions of the better paid workers and of the middle classes and that there has been slow consequential improvement in the conditions of the poorly paid workers or of those living in insanitary areas.

## A BILL TO CLEAR SLUMS

The present Bill introduces a radical change in application of State and local funds to the provision of housing. It is however a natural sequence to the policy obtaining since 1922, and represents a development which would have been impossible without the patient work of the last nine years. This Bill is designed mainly for the clearance of insanitary areas and the provision of houses for the poor. It does not cut off assistance for the rehousing of the ordinary better-paid working classes, but it leads, we hope, towards conditions in which the well remunerated ordinary working class will not have to rely solely on local authorities or on subsidies for the provision of houses. Many are restive because of the continued existence of the slum and the slow rate of its eradication. There are complaints that better results should have been shown. What are the facts? \* \* \*

The Act of 1924 began the policy which, by means of Government grants raised from Revenue and given to private persons undertaking the building of houses, induced private capital into house building. Similar grants were made to Public Utility Societies and later in 1924, when the local authorities had completed their million pounds scheme, these grants were made available to local authorities.

### WHAT HAS ALREADY BEEN DONE

The total number of houses where building had been arranged for under the 1922 to 1930 operations of the Government were by the 31st March, 1931, 24,566. State grants to the extent of £2,550,000 have been made available; £6,000,000 approximately has been provided by private persons; and £2,500,000 by local authorities—a total of approximately £11,000,000. \* \* \*

Prior to April, 1922, there had been built throughout the country 42,023 laborers' cottages. In urban districts throughout the country there had been built 9,022 houses for the working classes prior to 1922, of which 3,367 were in the City of Dublin. Looking back to-day we find that there had been built in urban areas since 1922 as a result of Government policy and Government assistance by

Private persons .....	3,568 houses
Public Utility Societies .....	1,156 “
Local Authorities .....	8,195 “
a total of.....	12,919

And in rural areas during the same time by

Private persons .....	11,084 houses
Public Utility Societies.....	178 “
Local Authorities .....	385 “
	11,647

Those who seek to spur us on to greater efforts may at least derive some solace from these totals and see in them implied much achievement in the future.

In this measure we direct our policy more definitely to eradicating the insanitary house and providing for its occupant and for the poorer working classes.



Apart from the actual provision of houses, the Bill deals with four very important matters—the Clearance Area, the Improvement Area, the Derelict Site which may be required for housing, and the Insanitary House. \* \* \*

A description of these four types of areas as given by General Mulcahy indicates that the new Irish law follows quite closely the English Housing Act of 1930 dealing primarily with slum clearance.

In order to rehouse the persons occupying sites that have been cleared of their slums it is proposed to subsidize the new housing as in England. Explaining the need of subsidy as contained in the new law, General Mulcahy describes the scheme as follows:

### MULTIPLE DWELLINGS COST MORE THAN COTTAGES

To re-house those deprived of their present habitation by a Clearance Scheme or an Improvement Scheme in some of our cities it will be necessary to provide apartments in large blocks in central areas. Any experience we have had in the building of this class of dwellings shows that the cost of a set of apartments in a scheme like this is considerably higher than the cost of a single-family house of the same capacity.

In the case of an apartment of this kind the Government proposes to pay 40% of the loan charge of the all-in-cost of the premises for a period of 15 years, and  $33\frac{1}{3}\%$  of these charges for a subsequent period of 22 years. We do not think that the cost of such an apartment should be more than £450 and it is not proposed that the Government would pay the percentage of the loan charges on any higher figure than this. Expressed in terms of present worth and in relation to a loan of £450 the subsidy of the State will be £162. It is contemplated that the percentage of the total capital cost borne by the State will be 36%; that borne by the local authority 36%; that borne by the occupier 28%.

Where re-housing is effected by the provision of single-family houses the total all-in-cost should in our opinion not be more than £350; and up to that limit the Government will pay 30% of the loan charges for 15 years and 20% for a further period of fifteen years. On the sum of £350 the present value of the subsidies will be approximately £82.

### THE BASIS OF THE SUBSIDY

And here it is contemplated that the percentages of the capital cost shall be borne by State 24%; by local authority 24%; by occupier 52%. It is contemplated that as far as possible a standard rent should be fixed, and that reductions in the cost of building should go to the ease of the State and the local authority. Where local authorities build to standards above those implied by the figures quoted £450 and £350 the excess cost must fall on the local authority or the occupier.

Where, apart from re-housing, local authorities build houses for the working class, the State subsidy will be given by means of a 15% payment of the loan charges for a period of 20 years. If the all-in-cost of such a house is £400 the value of the State grant will be approximately £45. A similar grant will be given to Public Utility Societies who build houses under certain conditions for renting to persons of the working

class. In the case of laborers' cottages the Government subsidy will be 20% of the loan charges, interest and principal for a period of 35 years; the present value of this subsidy being approximately £60 on a £300 house. Hitherto under the grant system it has been arranged that local authorities will repay their loans on the annuity system. It will now be arranged that local authorities will repay their loans on the instalment system. This will mean that the amount to be repaid will diminish as the period of the loan comes to an end; the heavier payments will be made in the beginning. \* \* \*

## TOWN PLANNING ESSENTIAL

That the Government of the Irish Free State recognizes the importance of carrying out slum clearance schemes only in connection with a comprehensive town plan was made evident by General Mulcahy on this occasion.

In his closing remarks urging the enactment of the new law, he said on this point:

I propose to introduce very shortly a measure which will give local bodies additional powers in the re-planning of such areas. Under the proposed measure a local authority may prepare a plan for their entire area or any part thereof, and in the case of Urban Districts the area to be planned may be extended under certain conditions to include portion of an adjoining area.

There will also be a general power for the planning of regional areas. In the cities of Dublin and Cork special regional areas will be proposed. The powers conferred on local bodies will be exercised with due regard to all legitimate interests affected. It is true that there has been little demand from local bodies for town planning powers, but it will gradually come to be recognized that the public welfare stands to gain immeasurably by a proper regulation of the growth and development of local government areas. While planning affects every sphere of municipal activity it has perhaps a more direct relationship with the provision of housing accommodation, and I am anxious that the new measure should become law, as soon as possible.

It would seem from these statements that the Irish Free State is soon to grapple with its slum problem and place itself in line with other progressive countries which are beginning to deal effectively with this difficult social and economic question.

## BELFAST TO DEAL WITH ITS SLUMS

Recent dispatches indicate that there is likely to be a slum clearance scheme carried out on a large scale in the city of Belfast as a result of representations made to the local authorities by the Regional Council of the National Federation of Building Trade Operatives which

pointed out recently to the Estates Committee of the City Corporation that such a scheme would provide considerable employment for local building trade workers, and at the same time serve a useful civic purpose by demolishing unsightly slum dwellings in various parts of the city and rehousing the tenants under more modern and sanitary conditions. At the time that this delegation waited upon the local authorities the proposal was received most sympathetically and every encouragement was given to it.

It is expected that the Central Government of Northern Ireland will contribute to the cost of the scheme, assurances to that effect having been given recently by the Northern Ireland Minister of Home Affairs, Sir Dawson Bates.

## THE SLUM DWELLER AND THE SLUM

The old question "Which was first the hen or the egg?" has its counterpart in the housing field where it takes the form of asking "Does the slum make the slum dweller or does the slum dweller make the slum?" It would seem to be almost as insoluble a problem as the more famous inquiry as to the hen and the egg.

One fact is sure that the habits of living and the character of the people and their intelligence and natural qualities are vital factors in dealing with slum clearance in all countries.

This view of the situation has been very strongly reinforced recently by a study of a recent Report of the Medical Officer of Health of the City of Glasgow, Scotland, in which he describes the efforts that have been made in that community to readjust transplanted slum dwellers to their new environment. The City of Glasgow for many years has been doing slum clearance work. That it is not doing it on a small scale is evidenced by the fact that between 1923 and 1930 it demolished 4,828 houses and rehoused the population thus displaced.

From a much longer experience than the past 10 years in dealing with this problem, the public officials of Glasgow have learned, as indeed the public officials of all cities who have attempted to deal practically with this problem have learned, that the people who have been living in slums cannot all of a sudden adjust themselves to a new environment and to a new way of living, that if slum clearance is to be successful and the people rehoused are to be permanently benefitted by this important change in their environment, it is necessary that they should be guided and helped in that transition period—in a word taught how to live.



## INSTRUCTIVE SANITARY INSPECTION

Accordingly, a few years ago the City of Glasgow appointed a number of women inspectors to make house to house visits among families that were rehoused in slum clearance schemes. This so-called "instructive sanitary inspection" is no new idea—having been practiced for many years not only in England and Scotland but in many European countries and even here in America. It has always been successful and there should be much more of it done. At the beginning of the year 1930 there were 4,070 families in Glasgow under such supervision. At the end of the year this number had increased to 4,527.

Dealing with this aspect of his work the Medical Officer of Health has the following to say:

I desire again to emphasise the social aspect of housing enterprise, especially as regards rehousing operations.

Management involves something more than the collection of rents and attention to repairs, and implies attention to human and social needs.

As the result of experience and observation over the past few years, it can be affirmed that the majority of tenants will respond to efforts made to improve their environment; but the extent of the response depends on the degree of wise and helpful aid rendered by appropriate officers of the local authority.

In Glasgow there is for this purpose a system of close co-operation between the Public Health Department and the City Improvements Department responsible for the management of the new schemes. The former has undertaken through specially delegated lady inspectors the function of routine inspection, assistance, advice and general supervision, exercised in a variety of ways for the purpose of maintaining standards of occupancy at the highest possible level.

Reports are given in the succeeding pages dealing with methods and results obtained by a system which has passed beyond the experimental stage and has now become one of the most important and valuable measures yet undertaken in the public health interests of the poorer classes of the community.

### ADJUSTING THE RE-HOUSED SLUM DWELLER TO THE NEW ENVIRONMENT

Dr. W. C. Gunn, who has given special attention to this aspect of slum clearance and rehousing, contributes the following remarks based on a recent survey of rehousing schemes in that city:

The problem of rehousing is by no means solved when the tenants of uninhabitable properties are transferred from insanitary dwellings to new rehousing schemes. The new environment is strange to them, and they find that their lives have been revolutionised all at once.

For one thing, housekeeping has become a much simpler problem. There is ample light, facilities for hot water and a total absence of dark

recesses—which are all too familiar in the old houses and which lend themselves to the accumulation of rubbish, dirt, and vermin.

Some years ago the standard of cleanliness in the rehousing schemes was not satisfactory in many instances. Added to the influence which the slums had exerted on the health and general physique of the housewife, they had also failed to educate her in what may be called “house-sense”, and the result of this was seen in the rapid deterioration of some of the new houses, and in the number which became infested with bugs.

Accordingly, a system of inspection of the new houses was instituted; the staff appointed for this duty is entirely female, some of whom are also trained nurses. At present there are 9 inspectresses carrying out this duty, 2 of whom do nothing else, and the others have also duties connected with inspection of school children and houses without the rehousing schemes. \* \* \* Their method of approaching this field of work is entirely advisory, and in the majority of cases the help and advice offered to the indifferent housewife has had the result of bringing about a better state of affairs in the household.

During the early part of this year, a series of inspections in each of the rehousing schemes was made, and the following are the general impressions obtained.

There is undoubtedly a very noticeable improvement in the standard of housekeeping maintained in all of the rehousing schemes. It was satisfactory to observe that in the oldest of them, namely, Logan Street in the south-side, Springfield Road in the east, and Hamiltonhill in the north, there are examples of housekeeping of a very high order.

### THE BATTLE WITH VERMIN

Out of a total of nearly 400 houses entered at random, bug infestation was found in about half a dozen instances only, and none of these cases was a gross example of what bug infestation can be even in the new houses. This is undoubtedly a definite evidence of progress. Another factor in the subjection of the bug has been the abolition of the wooden picture rail and wooden skirting board from the construction of these houses—an improvement suggested to and carried out some time ago by the Director of Housing. The traffic in second-hand furniture, pictures, old bedboards, and other articles which are such a dangerous source of bug infestation has steadily diminished.

Each new tenant before he leaves his old house has all his furniture and bedding disinfected by the Public Health Department and advice is given by the sanitary inspector on how to prevent vermin. When the transfer has taken place, the inspectress visits the new tenant at once and carefully inspects the furniture, pictures, bedding, &c., again; and for a period she pays particular attention to this new tenant until she is satisfied that the occupancy is likely to be successful.

Much of the success of the work of the inspectress depends on her method of supervision at this stage. A few prosecutions have had to be carried out to enforce the necessity for cleanliness and to prevent the whole tenement becoming bug infested; but each case was only taken up when all other methods failed. It may be pointed out that prosecutions are only taken with the greatest reluctance.

A feature of the majority of the houses is the endless variety of decorations adopted. The papering of walls is not encouraged.

Although, in the case of tenants who have their sense of housekeeping highly developed, there is no objection to this; but it has been found over and over again that where paper has been put on and bugs have got in, before the pest could be eradicated the paper had to be stripped from the wall—naturally to the great chagrin of the tenant.

In all of the rehousing schemes paint for the walls is used in a high proportion of the houses. Painting has its undoubted advantages and it is not very costly. It has in many cases brought out the artistic sense of the tenant and the results in many houses are most attractive. Although this high standard of housekeeping is not altogether due to the element of "exchanged tenants" as distinguished from the tenants from the slum areas, yet there is no doubt that "exchanged tenants" have set a good example in this respect.

### BUT 5% UNSATISFACTORY

The percentage of unsatisfactory houses observed during the itinerary was certainly no more than 5%. The dirty house is a peculiar problem in itself, and on entering there is experienced at once a feeling of being confronted with a number of insurmountable conditions—poverty, illness, mental inefficiency and absence of the will to do better. Most of this type sooner or later leave the rehousing schemes and find their way back to the slums which still remain. *This type will always keep the slums going.* It is difficult to put a figure on this class but I think 1% would fully cover it.

Throughout the schemes it was generally found that the gas fire in the rooms was most unpopular and seldom used, because of the cost. An impression gathered was that the standard of cooking has improved; and many are making full use of the ovens heated by the living-room fire for cooking generally. The washing boiler in the kitchenette has been found to be a boon but the cost of gas rather limits its use. Some of the boilers have been introduced without a ventilating flue through which the gas fumes can be carried off. This is to be deprecated and should be remedied where existing and avoided in future.

On the whole, the cleansing of stairs and the care of staircase windows are good, but here and there in all the schemes there are tenements below the standard expected; it is usually found that the occupants have originally come from the worst of the slums of the city—such as Richard Street, Muse Lane and Lyon Street. It is understood that a clause is being inserted in the "missive of letting" to the effect that tenants are responsible for the cleansing of staircase windows.

### BATHS POPULAR

It may be added that in the itinerary acquaintance was being renewed with tenants well known in their slum homes, and the change was in most instances gratifying. The use of the baths in the houses is fairly general—just as general as in any other type of house in the city. The bathrooms are kept in splendid condition and the old myth of coal being kept in the bath has long ago been exploded.

Although poverty is very evident in many homes and there may be very little furniture, yet a high standard of cleanliness is maintained. The clean tenant has always an encouraging air of optimism about her. There are many examples of houses which have been almost



completely furnished with furniture made at home including home-made wireless installations and there are home-made gramophones of excellent appearance.

Sub-letting of rooms was met with in some instances. Around the block houses in some of the schemes satisfactory gardening efforts have been made and in a few instances these are of a high order.

In summing up, one can confidently say that the rehousing from the slums has been most successful from every point of view.

This work is so important and has so much value for other countries that we give further full extracts from the Medical Officer of Health's Report dealing with this aspect of his work. He thus describes in detail the methods employed:

#### RATINGS FOR CLEANLINESS

House-to-House visitation in these schemes is undertaken by lady inspectors. At the beginning of the year 4,070 houses were under supervision, and at the end of the year this number had increased to 4,527 houses. \* \* \*

Records are kept by the lady inspectors to show the condition of the houses visited, classified into the categories "clean," "fair" and "dirty." These records have been used to compile the following tables which contrast the conditions of the houses at certain periods and for various groups of tenants.

Of the 4,527 tenants in occupation at the end of the year, 3,702 had held tenancy for the full year, while 825 obtained entry during the year.

In the following table the condition of the houses occupied by the 3,702 families is given as at the beginning and end of the year.

<i>Condition at beginning of Year</i>	<i>Condition at end of year</i>			<i>Group Per-centage</i>
	<i>Clean</i>	<i>Fair</i>	<i>Dirty</i>	
Clean .....	2,697	158	3	2,858 77.2
Fair .....	219	507	19	745 20.1
Dirty .....	1	36	62	99 2.7
	2,917	701	84	3,702
Group percentage .....	78.8	18.9	2.3	

It will be seen that there has been a slight improvement in conditions generally, although some backsliding among certain tenants is also indicated. One hundred and fifty-eight (158) tenants previously reported as "clean" were transferred to the "fair," and 3 to the "dirty" category; 19 who had been classified as "fair" were transferred to the "dirty" category. As a set-off, 219 "fair" and 1 "dirty" had progressed sufficiently to be classified as "clean"; and 36 "dirty" to be classified as "fair" at the end of the year.

Similar information is given for the 825 tenants who obtained entry during the year and in respect of whom supervision was of shorter duration than that of the preceding group.

<i>Condition at Date of Entry</i>	<i>Condition at end of Year</i>			<i>Group Percentage</i>
	<i>Clean</i>	<i>Fair</i>	<i>Dirty</i>	
Clean .....	325	14	2	341
Fair .....	139	310	9	458
Dirty .....	4	2	20	26
	468	326	31	825
Group percentage .....	56.7	39.5	3.8	

The improvement in this group is more marked, although the final condition falls short of the standard obtained by those in residence for the full year—56.7%, as against 78.8% “clean”; 39.5%, as against 18.9% “fair”; and 3.8%, as against 2.3% “dirty.”

The following table gives the condition, prior to removal, of the houses occupied by tenants who were evicted or left owing rent, and by tenants removing voluntarily.

<i>Condition at Date of Removal</i>	<i>Tenants evicted during 1930</i>		<i>Tenants removing voluntarily during 1930</i>	
	<i>Number</i>	<i>Group Percentage</i>	<i>Number</i>	<i>Group Percentage</i>
Clean .....	120	54.1	133	75.6
Fair .....	86	38.7	41	23.3
Dirty .....	16	7.2	2	1.1
	222	100.0	176	100.0

It is interesting to note that the cleanliness of the evicted tenants was much below the average, although the condition of the houses of the tenants who removed voluntarily compared favorably with the standards of the previous groups.

### A NURSE'S REPORT

Probably the best idea of what is involved in this work can be had by the detailed report of one of the visiting nurses, Nurse Matheson, the first woman inspector to be appointed for the supervision of rehoused families coming from uninhabitable houses. Her Report deals with the Eastern Division of the city, but, as the Medical Officer of Health points out, the general principles and the results obtained apply generally to the other parts of the city. Her report is as follows:

All the houses in the slum clearance schemes in the city are classed as clean, fair and dirty, according to the standard of cleanliness maintained by the tenant.

During the year 1930 the houses in the following schemes (except the clean houses in Duke Street and Haghill Schemes) were under my supervision, viz.—Newbank 358, Springfield Road 308, Garvald Street 24, Burgher Street 12, Westmuir Street 36, Parkhead 96, Duke Street (fair and dirty) 26, Haghill (fair and dirty) 42, Janefield Street 120, and Quarrybrae 130 (occupied at present)—total, 1,152 houses.

Houses in the clean class are visited once every 3 months at least and those in the other two classes at least every month, except new tenants in the latest schemes where a three-weekly call is made. These

frequent visits are necessary in the latest schemes to impress on the new tenants the standard of cleanliness required—particularly with regard to bathrooms, stairs, stair windows and proper ventilation.

Since the Glasgow Order Confirmation Act, 1929, came into force, the dirty tenants are keeping their houses much cleaner. With a few exceptions leniency has been shown to defaulters, especially in the case of dirty uncovered floors which are very difficult to keep clean in wet weather if there are many children, as is often the case. There is a house in one of the schemes which if visited by a stranger would be called dirty, yet some allowance must be made for this mother who is unhealthy, cooks for 13 and keeps her 5 beds in perfect condition.

## CLEANLINESS

The following table shows the number and condition of houses completed and occupied by December, 1930.

<i>Scheme</i>	1928			1929			1930		
	<i>Clean</i>	<i>Fair</i>	<i>Dirty</i>	<i>Clean</i>	<i>Fair</i>	<i>Dirty</i>	<i>Clean</i>	<i>Fair</i>	<i>Dirty</i>
Newbank .....	170	61	17	289	59	10	316	35	7
Springfield Road.....	231	64	13	221	72	15	220	75	13
Garvald Street .....	15	6	3	13	9	2	13	9	2
Burgher Street .....	Unoccupied			7	5	---	9	3	---
Westmuir Street .....	“			24	12	---	25	11	---
Parkhead .....	“			63	27	6	82	20	4
Duke Street .....	“			191	19	6	190	21	5
Haghill .....	“			---	---	---	276	35	7
Janefield Street.....	“			---	---	---	49	58	11

The standard of cleanliness is improving slightly but it is to be remembered that new tenants are constantly entering and until these are trained they tend to keep down the normal standard.

INTERMEDIATE SCHEMES.—In June, 1930, I visited 90 houses in an intermediate scheme in the Eastern Division. Of these houses, 75 were found clean, tidy, well furnished and satisfactory in every way; 11 were fair; and 4 were dirty. Another visit was paid to some of the “fair” class and the 4 dirty houses in February of this year. In the dirty houses, two of the tenants had left, one was clean, and the fourth was as dirty as any in the slum clearance schemes. The walls were all very dirty and a line was given to obtain coloring, as the tenant could not afford to buy it. Some of the tenants in this intermediate scheme came from houses where the rents were much lower than at present. Complaint is general that rents are too high and that gas fires are unsatisfactory; likewise the gas stoves which have to be used for cooking, as the interior grates in the living room cannot be used for this purpose.

## VERMIN

In the various schemes the following number of houses were found to have bugs: 1928, 157 houses; 1927, 187 houses; and 1930, 96 houses. During last year a considerable decrease in the number of bug-infested houses was noticeable. This decrease was probably due to the extra attention given by tenants to picture rails, the frequent use of paint instead of wallpaper and fewer lodgers bringing bug-infested furniture to the houses.



In the more recent schemes there are no wooden picture rails and the skirting board is of cement. So far, no bugs have been found on the walls, but in three cases chairs were found infested. It will be more difficult to discover bugs in these new houses, as the chief breeding haunts, the wooden picture rails, are absent.

During 1930 the following changes in the schemes took place:—

	<i>Clean</i>	<i>Fair</i>	<i>Dirty</i>
Left voluntarily .....	39	19	1
Exchanged within schemes.....	21	4	1
Evicted .....	35	13	3

The general reasons given for leaving were that the houses were too far from the works, the rents too high and the houses too cold. In a few instances mothers have died and fathers and children have gone to live with relatives; in two cases there were quarrels with neighbors, and in another case objection was taken to frequent visits because the house was kept dirty. Three tenants removed to England.

### NOTES ON INDIVIDUAL SCHEMES

**NEWBANK**—There is a marked improvement here, even in the case of dirty houses. A large number of the clean houses are occupied by unemployed people. There is little or no furniture, the bare floors are scrubbed, and the walls are colored with material provided by the Department. The tenants pay attention to the stairs and the stair walls. The gardens are cultivated in the block houses but not in the tenements. The tenants appear contented and the only complaint is the gas fires, especially in one or two ground flat houses which are inclined to be damp in winter. One woman with a large family says that every 6 weeks she pays £2 10s. (minus a rebate of 15s.) for gas. This sum is a big drain on her resources.

**SPRINGFIELD ROAD**—There is an all round improvement in this scheme, even in Lily Street which is the least satisfactory and in which without constant supervision the houses would revert to slum conditions, especially as regards stairs and stair windows. A stranger would probably form a wrong impression judging from the outside, as in most cases the interiors are kept quite satisfactorily. The block houses give little trouble; most of them are well furnished and the gardens are beautifully kept. Three of the highest awards came to this scheme last year from the *Daily Record* Gardening Competition. In the tenement houses the gardens are generally neglected. During 1929, 92 houses were bug infested but this year only 45 were found to have bugs. Most of the houses were cleaned with carbolic by the tenants and then painted if possible. With attention this scheme should rise to the standard of the others.

**GARVALD STREET**—The effects of former environment are noticeable here. The people came mostly from Richard Street—a once noted slum building. It is with difficulty that the houses are kept up to anything like the standard. The one redeeming point is that the house which was formerly the dirtiest is now usually clean. One house has been transferred from clean to dirty. This set-back was due to the mother's illness during which the father had to look after 6 children under 10 years, including a baby a few months old.

**WESTMUIR STREET**—Unlike most of the schemes, it is hemmed in between buildings but looks well as the windows are nicely curtained. Twelve (12) of these houses—two adjoining closes—are occupied in every case by unemployed people, only 3 of whom keep their houses clean. There is a downward tendency, as the mothers complain of losing heart because of the struggle to make ends meet.

**PARKHEAD**—This was occupied during 1929 and has given satisfaction, considering that the people removed from Coalhill and Society Streets—two very congested and dirty streets. Two of the dirty tenants are discouraging because of indifferent mothers, but the other two are likely to improve. The gardens are not being attended to, the excuse being that everything planted is stolen, as they are facing a main thoroughfare.

**DUKE STREET**—One hundred and ninety (190) out of 216 houses are clean and are visited by another nurse inspector; 20 fair and 4 dirty come under my supervision. Six (6) fair houses were transferred as clean during 1929 and have remained so. Three (3) of the 4 dirty houses are at times clean.

**HAGHILL SCHEME**—This scheme consists of 318 houses, 42 of which are unsatisfactory. It was completed and occupied during 1930. The majority of the 42 houses came under my care at the latter end of the year. The fair and dirty houses will require a lot of attention, as some of them have a very low standard of cleanliness.

**QUARRYBRAE AND JANEFIELD SCHEMES**—These newest schemes give the impression that frequent visits paid here will not be wasted. Already there is a marked improvement both in the condition of the houses and in the health of the people, especially the children. Remarks are often heard that before coming there the children would hardly take food, but now they can't be kept in it. The tenants are appreciating their new homes and wish they had been there years before.

That slum clearance involves a great deal more than a change in the character of buildings on an individual site is again illustrated by the methods employed in Glasgow. In addition to this splendid constant educational work among the housewives of the transplanted families there is also a keen realization of the fact that the children are a vital factor—particularly in the future welfare of the family—and that they cannot be neglected in any scheme which looks towards the rehabilitation of transplanted slum families. Consequently, the public authorities in that city have tied up their work with the public schools.

#### THE CHANGED CONDITIONS SHOWN IN THE CHILDREN AT SCHOOL

The Medical Officer of Health in his Report shows from the changes that have been noted in the conduct, behavior, appearance and physical condition of the school children the results reflected there from the

efforts made by the women sanitary inspectors and of the changed environment.

Reporting on this aspect of his work he has the following to say:

I am again indebted to the keen personal interest taken in the children in rehousing schemes by the headmasters and teachers in the various schools where these children attend. The headmasters of certain schools in the East End have again taken the trouble to furnish reports which may be taken to illustrate the general trend among rehoused children generally. Their observations cover the period from June, 1930 to June, 1931. Mr. Jamieson, Headmaster of Newlands Public School, Springfield Road, reports as follows:

I am pleased to state that in the majority of cases improvement in appearance and in intelligence, as well as in nutrition, has followed from the change of the children to more healthy surroundings. This is particularly noticeable among the older pupils who have now a higher ideal in life and cultivate a sense of self-respect. In some cases owing to financial circumstances and the general economic depression there is little improvement, and no doubt this would disappear on the return of more prosperous times. The Headmaster of Bluevale School reports as follows:

I have pleasure in reporting that returns from the teachers of this school indicate a further advancement in respect of *health*, etc., in the rehoused children. In *cleanliness* there is reached a good level throughout the school. Reports under *nutrition* range from good to fairly good—in the latter cases in young classes. *Intelligence* shows returns from good to average, with three classes (young pupils) showing fairly good. *Discipline* troubles are found only among the very young children, and these are entirely due to lack of control of the pupils who suffer from defective home training. Marked improvement is shown as such pupils travel up the school. *Clothing* is indicated as showing least improvement, though a fair number of pupils are provided with clothing by the Public Assistance Department. *Punctuality* is very good, with a few exceptions among the young pupils—again traceable to the home and again improving after a few months at school. *Precocity* is not at all marked, the pupils being normal in this respect. *Sociability* is returned as from very good to average, there being no evidence of ostracism on the one side or withdrawal on the other. It must be noted, however, that in several classes the bulk of infectious and clinic cases is found among the pupils from the slum clearance schemes. The numbers from these schemes are:—boys, 212; girls, 188; total, 400.

#### A DETAILED ANALYSIS OF IMPROVEMENT

Mr. Rintoul, Headmaster of Springfield Public School, has sent a full and striking report, which contains a painstaking analysis of the progress of the children. He states:

It will be noticeable from the tables that the child in the rehousing scheme now compares much more favorably with the other children in the same area. Clothing is provided (clothes,



underclothing, boots) in all necessitous cases by the Public Assistance Department and this is very much of the same kind as is provided by the parents of the other children. Food is also supplied wherever necessary, and as a result there is little perceptible difference between the slum child and the other so far as clothing and nutrition are concerned. This physical well-being reacts mentally and it will be noticed that in intelligence, discipline and precocity there is not much to choose between the two classes of children.

### THE REHOUSED CHILDREN COMPARED WITH OTHERS

The tables referred to contain an analysis of the 1,500 children in the school, in which comparison is made between the ordinary pupils and those from the rehousing schemes in each class. The tables—which cover the children in 8 infant classes, 8 junior classes and 14 senior classes—show clearly that the differences between the two groups of children are slight. The full tables are not given here but the following summary is quoted.

The method of construction of the tables was as follows:—Each class was divided into 2 groups—slum children and others. A standard of 10 was taken for each of certain mental and physical qualities—e. g., nutrition, intelligence, discipline—and the total marks gained by each group divided by the number of children in the group. The summary given below is obtained by treating the classes as individuals. That is to say, the marks gained by each group in each class in the senior, junior, and infant sections are added and the total divided by the number of classes in each of these three sections.

	SENIOR		JUNIOR		INFANTS	
	SLUM	OTHER	SLUM	OTHER	SLUM	OTHER
Cleanliness .....	7.4	8.0	7.3	7.8	6.8	7.8
Nutrition .....	7.6	8.3	7.1	8.0	7.2	7.9
Intelligence .....	6.8	7.7	7.2	7.6	6.7	8.1
Discipline .....	9.0	9.0	8.4	8.7	8.3	8.7
Clothing .....	7.1	7.8	6.5	7.7	6.9	8.4
Punctuality .....	8.7	9.7	8.0	8.0	7.5	8.3
Precocity .....	5.0	5.3	4.6	4.7	0.2	1.0
Sociability .....	8.3	8.7	8.0	8.0	7.1	8.1
	<u>59.9</u>	<u>64.5</u>	<u>57.1</u>	<u>60.5</u>	<u>50.7</u>	<u>58.3</u>

Mr. Falconer, Headmaster of London Road School where there are about 150 from the rehousing schemes, reports in the following terms:

*Cleanliness*—Improvement noticeable in nearly all cases. *Sociability*—After close observation—particularly in the latest schemes in Dalriada Street, Kinloch Street and Janefield Street—distinct advance is evident especially with the younger children between 5 and 7. *Intelligence*—Practically all the children were from 1 to 2 years behind when they entered this school and were mostly dull and backward. I should say that 50% of them have noticeably improved in general intelligence.

The report by Mr. John Donaghy, Headmaster of St. Michael's School, concerns 495 pupils. He states that results on the whole are very favorable—indeed very satisfactory—showing that nine-tenths (90%) of such children respond favorably to their improved conditions. Of the 495 pupils, the numbers which were not quite satis-

factory were as follows: cleanliness, 18; nutrition, 15; intelligence, 59; discipline, 1; clothing, 16; punctuality, 33.

Further details in connection with this report are being worked out in which the heights and weights of all these pupils are being compared with the standard figures for the city.

When taken in conjunction with the satisfactory reports on the standard of cleanliness which is being maintained in the houses of the slum clearance rehousing schemes, the progress of the children is a further indication that the results of slum clearance in Glasgow have been satisfactory and that slum clearance is now well beyond the experimental stage, having attained an objective which was scarcely hoped for five years ago.

## SLUM CLEARANCE SOMETHING MORE THAN NEW BUILDINGS

It is seen from what we have quoted from this Report what far-reaching social problems are involved in slum clearance.

That it is worthwhile there can be no question. But that it should not be taken up without a full realization of all it involves is equally without question.

We hope our American friends who are so actively advocating slum clearance will bear this important consideration in mind.

## MAINTENANCE STANDARDS

### ENGLAND'S MODEL BYELAWS

Acting under the authority and direction of the Housing Act of 1930, the Ministry of Health about a year ago issued a series of Model Byelaws dealing with Improvement Areas but more particularly dealing with the abatement of overcrowding and the maintenance of proper standards of housing conditions in such areas.

These have been published in a pamphlet of 20 pages entitled "Model Byelaws" XIII c. Improvement Areas.\* Under various Housing and Public Health Acts enacted since 1875 the local authorities have been empowered to make byelaws with respect to houses let in lodgings or occupied by members of more than one family for purposes specified in the Acts.

The Ministry of Health has, consequently, felt an obligation resting upon it to prepare a series of model or standard byelaws that would be susceptible of adoption by the 1800 local authorities throughout England and Wales. Hence this document.

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\* *H. M. Stationery Office. Adastral House, Kingsway, London, W. C. 2. Price 4d net.*

The Preamble to the Model Byelaws gives an excellent idea of their scope. It is suggested that such Preamble should read somewhat as follows:

*Byelaws made by the Blank Council for preventing and abating overcrowding in the improvement area defined on the map attached to these byelaws, and generally for securing the improvement of housing conditions and the subsequent maintenance of a proper standard of housing conditions therein. For fixing the number of persons who may occupy a house. For the registration and inspection of houses. For enforcing drainage and promoting cleanliness and ventilation.*

*For requiring provision of—*

- (i) closet accommodation;*
- (ii) water supply and washing accommodation;*
- (iii) accommodation for the storage, preparation, and cooking of food;*

*and, where necessary, for securing separate accommodation as aforesaid for every part of a house which is occupied as a separate dwelling.*

*For the keeping in repair and adequate lighting of any staircase.*

*For securing stability and the prevention of and safety from fire.*

*For the cleansing and redecoration of the premises at stated times.*

*For the provision of handrails, where necessary, for all staircases.*

*For securing the adequate lighting of every room.*

Then follow a series of definitions for purposes of the byelaws and then come the Byelaws themselves. They are in two Parts; those that relate to all houses and those that apply only to lodging houses or houses let in lodgings.

The requirements of the Byelaws are wide in scope and cover pretty thoroughly most of the problems that arise in connection with the occupancy of such houses, including sanitary arrangements, room overcrowding, the space that should be allotted to each occupant, the provision of proper and adequate sanitary waterclosets; water supply; accommodations for washing of clothes; for storage of food; repairs; drainage; ventilation; cleanliness, etc.

A further part of the Byelaws is given up to provisions with regard to their enforcement and a final clause concerns itself with the repeal of existing byelaws.

All students of these aspects of the housing problem will, we feel sure, be interested in studying these interesting Standard Maintenance Byelaws and comparing them with American standards.

## MUNICIPAL "SLEEPS"

How far municipal housing may go is illustrated by the recent action of the Kilsyth Town Council in Stirlingshire, Scotland, in deciding to furnish beds in their new municipal houses so as to enable the tenants to furnish their new houses more cheaply. This action of one of the local authorities in Scotland has been approved by the Scottish



Department of Health upon condition that a charge shall be added to the rent to cover the cost of the beds.

From beds to bedclothes will be the next step. And if it is appropriate for the municipality to furnish clothes for its citizens to use at night, why will it not soon seem logical for them to furnish clothes to use in the daytime. We are sure that there are many citizens in that country who really need better clothes than they have at the present time.

## ARCHITECTURAL GOOD MANNERS

### THE CONTROL OF ELEVATIONS

“Now who shall arbitrate?  
Ten men love what I hate,  
Shun what I follow, slight what I receive,  
Ten who in eyes and ears match me”

—Browning

The discussion in Parliament of the new English Town Planning Act has called attention anew to the desirability of some form of architectural control of buildings with regard to their appearance so that they will not spoil either the landscape or the town or the street in which they are placed either by their lack of harmony with the existing buildings or by their intrinsic bad taste and ugliness.

Perhaps no feature of the new English Town Planning Act has given rise to so many objections as this proposal to vest in the 1800 local authorities throughout England and Wales this kind of control over private property—many intelligent property owners who would otherwise be quite in favor of the measure fearing to trust such powers to the tender mercies of the average municipal council.

This subject of the “control of elevations” has been much discussed in recent years by the architects of that country. Three years ago there was a very thorough-going discussion of the subject at a meeting of the Royal Institute of British Architects held at York in which William Haywood voiced a view, which seems rather to be the controlling opinion of the architectural profession in England at the moment, as opposed to Government control of architecture.

This subject has received renewed attention by the publication a few months ago of a Report of a Special Joint Committee that was appointed following Mr. Haywood’s discussion of the subject at York. This Committee was composed of representatives of the Royal Institute of British Architects, the Institution of Municipal and County Engineers, and of the Council for the Preservation of Rural England.

The Committee's recommendations were 3-fold.

*First*, that all local authorities should have the power and the duty to consider, criticize, approve or reject plans and elevations for all buildings;

*Second*, that both local authorities and county councils should be encouraged to extend as rapidly as possible the control which may be obtained through town planning schemes; and

*Third*, that the Minister of Health should be asked to receive a deputation to emphasize the importance of planning schemes for the whole country, and for the purpose of securing the services of architects or panels of architects to advise local authorities and county councils on this question of the control of elevations.

It will be recalled that a few years ago the Ministry of Health prepared and caused to be published a so-called "Model Clause" dealing with this subject. Its main provisions were

That any person proposing to build or to add to or substantially alter an existing building should furnish the Council with drawings of the elevation of the building; that within one month of the submission to the Council of such elevations the Council should either approve them, or if they considered that "having regard to the general character of the existing buildings in the neighborhood or of the buildings proposed to be erected therein," the elevation of the proposed new building or alteration would "seriously disfigure the neighborhood"—whether by reason of the height of the building, its design or the materials with which it was to be constructed—they should then refer the matter to an Advisory Committee for their decision.

This Advisory Committee was to be a standing committee appointed by the Council for the purpose of assisting them in this work, the committee to consist of one member who should be a Fellow of the Royal Institute of British Architects and be nominated by its President, one member to be a Fellow of the Surveyors Institution, and one member to be a Justice of the Peace to be nominated by the local Council, and members of Council were disqualified from serving on such Advisory Committee.

The plan contemplated that when a matter was thus referred to the Advisory Committee, the architect should be notified so that he might take up the matter with the Advisory Committee and meet any objections that may have been raised to his plans.

Within one month of the architect's reply to these objections, it was required that the Advisory Committee must either approve or disapprove the proposed elevation and that their *decision should be final and conclusive*.

As will be seen, the local authority or Council is thus really the arbiter; for, it is only where the Council does not wish to approve the

elevations that they refer them to an Advisory Committee for report and action. This seems to be a serious defect in the plan. As a rule, local authorities do not very willingly delegate such wide powers to outside standing committees constituted as these are.

Some of the difficulties involved in the question were very effectively presented by the *Architects' Journal* of London at the time the Report of the Joint Committee on the control of elevations was presented. On that occasion they said in part:

The first thing that leaps to the mind when this subject is discussed by architects is—whose elevations? Are we speaking of the worst forms of rural desecration, of urban vulgarity, picturedomes and the like, or of more socially exalted buildings?

By what standards are the officials of urban and local authorities to “criticize, approve, or reject plans and elevations for all buildings?”

Are these same officials to use their critical faculties as part of a considered plan of street architecture arising out of the town plan for the place as a whole? On what are their judgments of the fitness of material to be based? To what criteria will they turn? From what reservoir of knowledge, artistic experience and sensitiveness to architectural form will they draw in pursuance of their high, their magnificent calling? What is their taste? Where is their education? And who, over the length and breadth of England, are they?

The subject is full of difficulties even in England—much more so in America where there are constitutional and legal questions which seem almost insuperable. But the control of architecture by municipal ordinance under the police power enforced by the local authorities is not without its advocates in the United States. Notable among these is Charles H. Cheney of California who we believe has a number of followers among the intelligentsia of the country. It is in this control by municipal authorities that the weakness of the scheme lies.

Discussing this aspect of the question we said in these columns three years ago:\*

We shudder at the thought of what might happen to the architect of a beautiful finely designed building notable for its absence of ornament but possessing beauty to a high degree through proportion, the right scale, proper fenestration and artistic and intelligent treatment of mass.

Were we to have politically appointed censors of architectural taste, we can conceive that such a building might easily fail to pass the censor who might feel that “it was too plain”, that it was spoiling the rest of the neighborhood, and insist upon its being loaded up with extraneous architectural ornament, so-called, and thus ruin its beauty.

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\* *Housing*, Vol. 18, June, 1929, pp. 133-136.



## WHEN IS A HOUSE INADEQUATELY LIGHTED?

### INTERNATIONAL STANDARDS FOR DAYLIGHT ILLUMINATION

What constitutes adequate lighting of a building? What constitutes inadequate lighting? By what principle should adequate daylight illumination in all parts of a residential building be secured? What is the relation between the height of a building and the open space on which it abuts? To what extent and by what means are conditions of adequate lighting changed owing to thickness of walls, location of windows, opposite buildings? What are the principles of daylight penetration and how is it to be secured? To what extent are standards of adequate lighting to be varied because of the latitude in which a city is located, because of climate, of smoke nuisance, of the amount of ultra violet rays in the atmosphere?

These are some of the practical questions that need to be settled before scientific control of daylight illumination can be had in any country.

It is mortifying to have to report that in the United States where the evils of lack of light in our cities are greater than in any other civilized country in the world we are, perhaps, further from approaching a scientific basis for our treatment of this subject than almost any other Western civilization.

A false local pride, a petty provincialism, seem to have prevented us from accepting standards worked out after years of practical experience by our cousins across the water in England, where for centuries they have had to deal in practical fashion with this subject in assessing and awarding damages by the courts for deprivation of "Ancient Lights".

The findings of even the International Commission on Illumination have not thus far been accepted by our public officials charged with responsibility in this field. Instead, they have set up their own standards based upon no practical experience and formulated by men whose chief claim to speak with authority in this important field is based upon their activities in connection with artificial light and not with daylight.

While we have thus held back and been unwilling to profit by the experience of other countries, England has forged ahead. Out of her long experience in dealing with the administration of the Law of Ancient Lights and in settling the practical and difficult questions that have arisen in the English courts in connection therewith, she has

evolved standards that do work, that are practical and that result in the establishment of conditions that all should desire.

The achievements of England in this field have recently been given especial emphasis by the meeting of the great Triennial Plenary Congress of the International Commission on Illumination held in different cities in England about a year ago at which technical delegates from 16 European countries were represented.

It is gratifying to be able to report that on this occasion and as a result of the deliberations of this Congress—and of the work done by the British National Committee which in 1925 at the meeting at Bellagio had been appointed as Secretariat to organize the international research on the subject of daylight illumination—standards for determining what constitutes inadequate light in buildings were unanimously agreed upon. These were set forth in the following Resolutions:

1. It is recommended that in general the use of contour lines of constant daylight factor (iso-daylight factor lines) be adopted as a convenient method of considering daylight illumination in all questions affecting the disposition, adequacy and efficiency of the lighting of interiors by means of daylight.

2. It is recommended that at all parts of interiors where the daylight factor at table height (85 cms.) is less than 0.2%, the daylight shall be regarded as definitely inadequate for work involving visual discrimination over reasonable periods of time and comparable with ordinary writing.

This is not recommended as a standard of adequate intensity of illumination.

3. It is recommended that the National Committee bring the above resolutions to the notice of the architectural and medical organizations, and also the authorities responsible for the framing of building regulations in their respective countries.

The British Report as embodied in an explanatory Paper presented to this Congress by the British National Committee has been summarized by Percy J. Waldram, one of the leading authorities in England on this subject, in a Report rendered to the Royal Institute of British Architects, whose representative he was on the National Committee.

In this Report Mr. Waldram summarizes the situation as follows:

The Royal Institute is no longer isolated in its advocacy of the conservation of such light, air and sun as remains in our overbuilt towns.

Within the last few years a most remarkable and even revolutionary change has taken place in all countries in the public appreciation of the value of light and air; which has already affected public opinion with regard to the permissible height and density of buildings in towns and bids fair to change it completely.

The old fetish that everything, even public health, must of necessity be sacrificed to any demands, however extravagant, made in the nominal interest of business and industrial convenience is rapidly giving place to a more sane appreciation of real values.

Those who have in the past preached, in season and out of season, the doctrine of high buildings as the orthodox means of commercial

salvation, find their arguments criticised, and even their motives questioned.

Not only is it realised that demands for greater and greater concentration tend to defeat their own object by intensifying traffic congestion, but it is also appreciated that in many cases such demands are merely a specious cloak for the real object of concentrating the utmost rental value on to town sites for the sole purpose of enriching a few lucky individuals.

The cause of this sudden change is not far to seek. The marvellous cures of disease in Alpine sanatoria by mere exposure of ailing bodies to light and sun, and the even more miraculous results of irradiation in climates like our own, where some 60 per cent. of possible sun is lost behind clouds, has aroused the enthusiasm of medical practitioners and through them of the public at large.

Those who have experienced in their own persons the effects of nature's free restoratives, light, air, and sun, are no longer content to submit to perpetual twilight or to artificial light all day and every day.

Business men are seizing every opportunity of migrating from narrow overbuilt streets in crowded central areas to offices where their clerks and typists, no less than themselves and their departmental managers, can work in natural light and air and enjoy such sun as our climate affords.

Offices whose only aspect is the miserably inefficient hole miscalled a "light" will no longer command high rentals. It is increasingly difficult to let them at all.

Architects have not been slow to sense the new feeling. In one of the latest buildings to secure the London Architecture Medal, the Underground Railway Offices at St. James's Park, some possible lettable floor space was sacrificed in order to bring the customary internal light wells to the outside, resulting in a cruciform plan with every room well lit and no neighboring buildings materially obstructed. In one of the latest blocks of residential flats, Crophorne Court, Sir Giles Scott has sacrificed even the orthodox flat façade in order to secure the maximum of light and sun. On the Continent, the cult is even more marked and is well epitomised in Corbusier's arresting phrase "*Je dessine avec la lumière.*"

The whole world is of course merely reverting to the wise common sense of the ancient Greeks and Romans. The former vigorously practised heliotherapy or sunbathing not only as a cure for disease but as a tonic for athletes; whilst the latter, appreciating the danger of a C<sub>3</sub> working-class, enforced laws protecting a sufficiency of light even on the sunny shores of the Mediterranean.

Recorded legal decisions under the Roman law of light in Pompeii B.C. 4, in Byzantium A.D. 800, and in England A.D. 1600 are characterised by a severity in comparison with which decisions under our modern law are mildness itself.

Those who consider the Prescription Act to be a mere piece of fussy grandmotherly legislation might note with advantage that in the case of *Maurice v. Baker* 1617 it was found necessary to lay down the rule that the *undoubted right* of an aggrieved person to enter upon the land of his neighbor, to pull down a wall affecting his light, and to destroy the foundations, must not be exercised *until* the nuisance had actually been caused.

The Roman law of light, which we have inherited, protected light as a personal property. In times when its invaluable properties were



universally appreciated this doubtless served to protect the interests of the community quite as effectively as any form of restrictive building regulation. Possibly more so, for the problem of "*quis custodiet*" is not new. But when class civilisation was overwhelmed by the flood of barbarism, the science of heliotherapy was lost and forgotten, or discarded medically in favour of semi-superstitious nostrums, and later of vegetable and mineral drugs.

During the constant warfare of the Middle Ages the security essential to the growth of prosperous centres of commercial and industrial activity could often only be found in walled towns.

The development and expansion of industry promoted by the city walls practically enforced higher and higher buildings and the utilisation of open spaces, and overcrowding came to be regarded as an inevitable feature of urban life.

The Roman law of light either fell into desuetude or where it survived, as in England, was often abrogated by mutual consent between property owners to whom light meant little or nothing or at most a commodity which they could sell at a comfortable or even extortionate figure.

Even when modern artillery and more settled conditions rendered obsolete the old constricting ring of fortifications the habits of centuries have died hard.

Although business men and artisans have gradually given up the habit of living over their warehouses, their shops and their workrooms, and have adopted the amenities of suburban life for their families they have long been content to spend their own working lives in stuffy gloom and to consider such conditions to be inevitable.

The conventions which decree that certain professional and business activities should be carried on in the centre of towns and even insist that those who aspire to prominence must be housed in particular streets are, in these days of rapid telephonic and postal facilities and speedy transport, based far more upon tradition than upon actual convenience. But unfortunately, although obsolete, they still operate powerfully, and the ever-increasing demand for lettable floor space upon sites favourably situated has long presented an irresistible temptation to their owners, when faced with the prospect of a heavy obstruction, to barter away their legal rights for permission to darken their neighbors' windows themselves at some later date.

There are so many of such reciprocal agreements in existence binding future owners in perpetuity that in all probability the time has gone by when the old personal Roman law can be trusted to protect the community even when aided by the most complete awakening of public opinion.

Even though a property owner may (as every property owner should) regard himself merely as a temporary trustee, morally bound to do nothing and to permit nothing which would affect the thousands who will occupy both his premises and his neighbors' in future years, long after all interests in both have passed, by death or by sale, into other hands, he is tied all too frequently by agreements entered into by some selfish predecessor in title.

Until such reciprocal agreements are rendered illegal—as the Prescription Act rendered illegal the precisely similar "custom" of London and other towns enabling everyone to build as they pleased—the community at large can only be protected by restrictive regulations.

When the British National Committee was first constituted in 1925, after the triennial meeting of the Commission at Bellagio, it consisted of representatives of H.M. Office of Works, the Ministry of Health, the Dept. of Scientific and Industrial Research and the National Physical Laboratory. At the instance of the writer, the R.I.B.A. was added to these bodies, Mr. Alan Munby being appointed by the then President, Mr. Walter Tapper. He was succeeded by Dr. Unwin, who had previously represented the Ministry of Health, and, later by the writer, from whom Dr. Unwin took over representation of the D.S.I.R.

The Council R.I.B.A. has therefore been in touch with the British National Committee from the first, and its representative was one of the two British delegates to the triennial Commission meeting at Cambridge.

Throughout the whole period of six years during which the British Committee has collaborated with national committees and experts on the subject in other countries, co-ordinating and circulating their researches as Secretariat, it has adhered to the policy of securing agreement as to general data and the simpler methods and practical approximations applicable to general problems, such as would enable authorities responsible for building regulations and public health to arrive at broad decisions with the maximum of information as to their effect and the minimum of labor. But this was carried on *pari passu* with agreement upon the more exact, but more tedious methods applicable to the determination of border line problems.

The methods and standards which have gradually been evolved and perfected in this country in connection with disputes as to light were not even suggested to other countries until they had survived long and rigorous tests by H.M. Office of Works and the National Physical Laboratory, the results of which were published by H.M. Stationery Office (Technical Papers Nos. 7, 10, 11 and 12, Illumination Research, D.S.I.R.).

During the period of such testing, enquiry was made as to alternative methods used or suggested in other countries, and it was not until all such possible alternatives had been examined and found wanting that the British methods and data were put forward with due proofs of their accuracy and practicability. They are epitomised in the resolutions unanimously adopted at U.S.A. and at Cambridge, but the British Report which was adopted with them also describes simple approximations sufficiently accurate for simple general problems; and a paper (The Provision of Daylight in Building Regulations) presented by the British National Committee at Glasgow to the Congress which preceded the Commission proper illustrated a number of practical problems worked out both approximately and in precise detail.

The general basis of the approximate method of attacking the simple general problems to which building regulations would probably be limited, such as the permissible height of buildings in streets of different widths, the proportions of light wells, etc., is quite simple. It is based on the observed fact pointed out in the British Report, and also in Technical Paper No. 7 (*supra*), that in cases of obstruction sufficiently severe to require limitation and caused by level obstructions extending across the aspect of windows, the agreed limit of inadequacy (0.2 per cent. daylight factor) may, for all practical purposes, be considered as identical in position with the limit of penetration of direct light usually known as the "no-sky line." As the latter can be ascertained in such cases by lines drawn from the top of the obstructions through the tops of window openings opposite and continued down

to table height, the rooms lit by windows facing such continuous level obstructions are divided at once into two portions, one of which is inadequately lit and the other adequately lit.

The effect of any given permissible degree of continuous unbroken obstruction can, therefore, conveniently be expressed in terms of the percentage proportions of the area of rooms at different floor levels which will by it be rendered inadequately lit. But to secure useful and comparable results, it is obviously necessary to consider the effect of different degrees of obstruction upon some standard section indicating floor heights, room depths and fenestration which would represent a reasonable average of architectural practice in modern buildings.

Regulations which attempted to secure adequate lighting behind unduly low window heads or to unduly deep rooms would require impossibly low standards of permissible building heights; whilst regulations based upon abnormally generous fenestration would leave large numbers of reasonable buildings inadequately protected.

The R.I.B.A. was requested to supply such a typical section to represent average modern architectural practice in town buildings as a guide to other countries in the preparation of similar sections typical of their individual practice.

The Science Standing Committee published a suggested section in the JOURNAL 12 April 1930, and invited comments and criticisms. The latter were collated and considered, and the proposed section was slightly modified. It is reproduced in the report with British and metric dimensions. (Fig. 1.)

The operation of setting up in front of such a section points representing the height and distance of the top of various obstructions gives interesting and rather unexpected results.

It will be found for example that a building height of 50 feet in a street 50 feet between buildings, creates a far larger proportion of inadequacy than say a height of 30 feet in a street only 30 feet wide, and far less than a height of 70 feet in a street 70 feet wide. The reason is that the window heights do not vary in scale with varying widths of street. In so far as slightly lower floor heights may be expected in narrow streets and slightly higher in very wide streets, these differences are modified.

One would expect from this that it would be possible to fix upon a standard moderate street, say 50 feet between buildings, and to find some practical equivalent having a similar effect for narrower or wider streets. But immediately this is tried one is met by the fact that equivalent heights which would secure equality of injury to ground floor rooms differ in their effect upon the rooms of upper floors, and that these differences vary from floor to floor, as well as with different street widths.

For example, if the lighting conditions in a street 50 feet wide between buildings 50 feet high, is taken as a standard, then the building heights which would secure equal lighting conditions to ground floor rooms in streets 25 feet and 100 feet wide would be 31 feet 9 inches and 86 feet 3 inches respectively. To secure equal lighting conditions to first floor rooms, the limiting heights would require to be 38 feet 6 inches and 73 feet; whereas if the lighting of second floor rooms were the criterion, then heights of 44 feet 3 inches and 61 feet 9 inches would be required.

Regulations intended to restrict excessive obstruction to light by defining a given ratio of height to distance such as a permissible height



of buildings in a street equal to the width between buildings, or that width multiplied by  $1\frac{1}{2}$ , 2, 0.5, or any other fixed ratio would therefore secure a greater proportion of adequately lit floor space in rooms fronting narrow streets, and proportionately less light in the wide streets.

Regulations could doubtless be devised to secure approximately equal lighting conditions to say all properly designed ground floor rooms, the upper floors being disregarded as being safeguarded by the protection given to the ground floors.

For instance, a regulation might be framed which decreed that no ground floor having window heads at the standard height should be left with less light than it would have if situated in a street 50 feet wide between buildings with a building height opposite of 50, 75, 100 or 30 feet, or any other fixed figure. Any such regulation would permit relatively high buildings in narrow streets, decidedly high buildings at street intersections and virtual skyscrapers fronting permanent open spaces. But in the restriction of overbuilding in the interests of health, light is not the only consideration; ventilation is equally important, and in connection with air circulation in towns open spaces and street intersections are of the utmost importance. It is quite logical to secure a little more light in narrow streets than is found to be necessary in wider and more airy thoroughfares.

These considerations indicate sharply the defects of the individualistic Roman law. The owners of corner sites at street intersections might be able to build to great heights without causing actionable injury to any neighbors, but thereby largely stagnating the air along entire streets. It requires a communal building law to prevent them from doing so.

Opinions may differ as to the merits or demerits of any given regulation, but there can at least be now no excuse for any ignorance as to the facts, which has so long characterised public opinion in all countries.

The leading part taken by this country in the matter is, of course, only to be expected. Had other countries been forced by similar climate, similar law and similar concentration of town buildings by intense industrial activity to study the subject as closely, they might easily have produced a similarly complete and possibly a better technique in a shorter time.

## ULTRA-VIOLET GLASS IN MUNICIPAL HOUSES IN ENGLAND

That England is ahead of the United States in its housing has long been demonstrated. Now comes the news that England is taking a step that America may well envy. In the municipal housing schemes that are being developed throughout all parts of England an increasing number of local authorities are requiring the new municipal dwellings to have their windows glazed with Vita Glass in order to admit the health-giving ultra-violet rays. The Carlton Urban District Council near Nottingham in 12 new houses which they are building, the Newburn-on-Tyne Urban District Council building 88 houses, and the Bingley Urban District Council building 24 new houses have all included Vita Glass in the specifications. In connection with this

announcement it is pointed out that tests made recently in England proved that certain areas of Britain have an even greater share of the ultra-violet rays than are to be found at the Alpine health resorts like Davos and others.

We predict that if this use of glass admitting the ultra-violet rays becomes general in the homes of the working people of England, Great Britain will in a short time have a new race—and will, indeed, have an “A-1” population in place of a “C-3” one.

### HOUSING IN PHILADELPHIA IN 1931\*

The waste in city administration due to corruption is small contrasted with the larger loss occasioned by the lack of city planning. This is the key note of the 1931 Report of the Philadelphia Housing Association. It is one of the things that city planners and housing specialists have been trying for years to drive home but without effect. It is only in periods such as these, when cities are faced with almost insurmountable difficulty in keeping their budgets balanced that they seem willing to think deeply on such problems. As Mr. Newman puts it, “public improvements are projected without determining possible adverse consequences or ultimate costs or probable revenues. Many of these improvements encourage population shifts which deplete older sections, leaving empty structures, obsolescent and deteriorated buildings and unused land.”

The Report presents spot-maps showing areas of the city which have been extensively dehousing. Among the principal causes are deterioration of buildings, lack of adequate open space, congested traffic, dirt and noise. While the outlying wards of the city and the suburban areas were growing rapidly in population, the central wards were losing their people. This is the situation that has been confronting most large cities. In the light of the danger that it presents in declining revenue from taxation in these depopulated areas, it becomes a problem that can no longer be dodged. In most of the wards showing loss in population there was also a decline in total assessments totalling in a two-year period \$25,000,000. This means a decrease in tax revenues of about \$700,000. Development of new areas as older sections become blighted means increased expenditures for schools, fire stations, police stations, municipal offices, sewers, street paving, street lighting. In addition it means the extension of telephone service, gas, electric lines and street cars the cost of which the tax

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\* *Philadelphia Housing Association, 1600 Walnut St., Philadelphia. 40 pp. Price 25 cents.*

payers in general have to meet, while at the same time the tax revenues from blighted areas are decreasing. Mr. Newman asks why cities are willing to meet the increased cost of opening up new areas and at the same time blindly refuse to concern themselves with the replanning and rebuilding needs of older areas. Humanitarian appeals have failed to bring action. The inescapable economic facts now presenting themselves may be heeded.

It is pointed out that the expectation that blighted areas will slowly be taken over by industry is based upon a fallacy. Industry will not seek such locations in any large measure because of prohibitive land values. Furthermore, there cannot be within any reasonable period of time enough expansion of industry to occupy these areas. What is needed, we are told, is a programme. Such a programme should include the elimination of unfit structures, the replacement of speculative management by large-scale corporate management; replanning including the elimination of narrow and useless streets; provision of small parks and other open spaces and the reclamation of whole areas by modern, large-scale housing developments.

In the discussion of home ownership we learn that occupant ownership is approximately 47 percent. This is high in comparison with most cities in the country. The percentage of owned homes in the low-cost group is of course small, as would be expected—only 10% of homes owned being valued at \$3,000 or under. Thirty-four percent (34%) of the rented homes are let for less than \$30 a month. While doubling up of families is considerable, it is less than had been expected, being 5.5% among white tenants, as contrasted with 22% among Negro tenants.

We get some idea of what has happened to new construction when we read the statement that the amount spent for dwelling construction in 1931 in Philadelphia was but 5.5% of the peak year 1925. There is considerable evidence of a high rate of vacancies in apartment houses—explained by Mr. Newman as due to the fact that there is a strong tendency to reach an oversupply of apartments in cities which are accustomed to one-family occupancy. This statement is borne out by the experience of other cities. One result of the striking decrease in the number of houses built is the elimination of many builders from the field. While in 1925 there were 850 different builders active in Philadelphia, in 1931 there were but 106. Most of the builders thrust out of the field were apparently of the less competent type. In new construction a tendency toward providing larger lots and more open space is noted.



During a period of 9 years 5799 residential buildings have been razed—dehousing approximately 51,000 persons. A large percentage of the buildings destroyed were obsolescent.

The number of sheriff's writs continues strikingly high. There were 17,985 in 1931—an increase of more than 1,000 over the previous year—the number of such writs issued monthly in 1931 is equal, Mr. Newman's report tells us, to the total number issued in any depression year since 1900. There were more failures in home ownership in the past 4 years than in the preceding 28 years. It is significant that these failures in home ownership have not been primarily due to failure to pay taxes; that factor involved only 1.6% of the total number. Certain banks, insurance companies and trustees for estates are criticized for making unreasonable demands upon home owners to reduce first mortgages when due.

Progress is noted in the number of improvements in sanitary conditions. Of the 7647 violations reported by the Housing Association to the city, some 85% were corrected which is said by the report to be "the best record for improvement in over a decade." On the other hand, it is pointed out that many complaints which would be made and pressed in normal times were withheld because of the severe economic conditions. This is true not only of Philadelphia but of other cities. The situation that we are now in, there as well as elsewhere, represents a definite check to the progress of housing betterment.

BLEECKER MARQUETTE, Executive Secretary  
Cincinnati Better Housing League

## CALIFORNIA'S AID IN HOME OWNERSHIP TO VETERANS

In these days of foreclosures and rumors of foreclosures which haunt the average home purchaser with an unpaid mortgage, it is refreshing to find the most liberal home-financing machinery in the United States still going strong and treating with great humanity the delinquencies due to illness or unemployment. And from another angle, in these days of marches on Washington and sharp demands for bonus payments, it is pleasant to find the veterans of California in state convention unanimously petitioning the Governor *not* to declare a moratorium on the payment of veterans' loans lest it seem to the tax-payers of California a violation of campaign promises that the veterans' home ownership system would never cost them a cent. Not to make this sound too ethereal, it should be added that 11,000 veteran applicants

for homes are still on the waiting list. Over 10,000 veterans have already secured homes; and the third bond issue approved by the people of California for the purpose has been expended—\$50,000,000 in all. Homes for the waiting list depend, therefore, on a new bond issue being approved by the voters.

The latest information comes from John P. Brennan, Chairman of the Veterans' Welfare Board of the State of California, concerning 7,300 replies to a questionnaire recently sent by the Board to its home owners. Forty to one (40 to 1) they expressed themselves as highly pleased with the homes they had obtained and with the manner in which they had been able to finance them. Five to one (5 to 1) they stated that they would have been unable to achieve home ownership without the sort of help furnished by the Veterans' Welfare Board.

It may not be superfluous to state just what that help is. After investigating the applicant veteran and the house he wants to acquire—whether already built or existing only in plans and specifications—and deciding that the veteran is of good character; has one or more dependents; wants the house for his own use; is not a man of property but has enough income to be able to meet his payments; and that the site, house plans, materials and workmanship are good in themselves and good value for the price asked; the Board buys the house for cash—which results in an average saving of close to \$1000—the veteran pays 5% down on the purchase price and another 5% to cover his share of administration costs throughout the life of his contract.

On a \$5000 house—the largest amount the Board will spend for a house and lot, though it goes up to \$7500 in the case of a farm—the monthly payment is \$33.10. In 20 years that pays off the principal and 5% interest on the loan in the meantime. The State Board obtains its funds from a special issue of bonds authorized by the voters at a general election. They are serial bonds, redeemable over 20 years with interest rates from 4 to 4½%. The veterans' payments meet principal and interest on the bonds. The difference in interest rates is used to build up a reserve fund. Up to December 31, 1931, \$2,463,000 worth of the serial bonds issued had been redeemed.

The 246 homes which had been repossessed and sold up to June, 1930, actually brought a net profit to the State. But that was in normal times. It is evident from Mr. Brennan's statement that without any formal moratorium great forbearance has been shown by the Board to its home buyers during the depression, and that delinquents for the present at least are being carried instead of sold out. On September 15, 1932, accumulated arrears amounted to \$410,781.47; and on October

15 to \$414,126.74. The small increase during that month was felt to indicate that the situation was in hand.

It is of interest to note that 2,050 of the home purchasers and 103 of the farm purchasers belong to the wounded or disabled class. They at least are sure of a monthly check from Washington.

EDITH ELMER WOOD

## A STUDY OF URBAN LAND USES\*

In the process of consciously guiding the development of the American town—which we call City Planning—the logical allocation of area to the various types of use is a basic consideration. By determining in advance the probable requirements in area and in location for the several classes of residential property, business and industrial property, streets and other public spaces and by distinguishing and stabilizing these use areas through a zoning plan and a city plan we are able to get a handhold on the entire problem of building cities rationally and economically.

In this book we have a study of the proportionate area and frontage devoted to the several functional uses of urban land in 22 American towns ranging from 1500 to 300,000 in population, made by one of the most experienced of our city planners.

For all who desire to understand the structure of the American town from the standpoint of land uses this volume gives an excellent exposition of how to go about making the necessary surveys, what to study and how to study, and it also supplies data by which any city situation in this wide population group may be compared with the findings in a score of carefully studied towns.

The book is an extremely valuable addition to the published material in this field.

To cite only a few of the significant Findings: The trend in housing for these towns seems now to be away from multiple apartment buildings and toward the continued use of a great preponderance of single-family houses. The areas normally required for business and industrial use are vastly smaller than is popularly supposed. Forty per cent (40%) of the private land in these towns on the average is vacant—a burden to the owner and to that community.

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\* *Urban Land Uses*, Harland Bartholomew, Harvard University Press, 1932. Price \$3.50 168 pp. Illustrated. Many tables and plates. Fourth of Harvard City Planning Studies, edited by Henry Vincent Hubbard and Theodora Kimball Hubbard.



Our zoning ordinances—reflecting the ambition of owners and developers to use land as intensively as people will live on it—generally establish standards of area per family devoted to residential occupation lower than the average of normal uncontrolled development in the several types of districts. For this and other reasons many of our cities require much more careful restudy of their zoning plans. We have only pioneered thus far, and many refinements for sounder zoning are ahead of us.

JACOB L. CRANE, Jr.,  
Chicago

## LAND SUBDIVIDING AND ITS USE\*

The most recent of a series of valuable studies relating to the use of real estate prepared by the Bureau of Business Research at the University of Michigan deals with subdivision activities in the metropolitan area of Grand Rapids, Michigan.

A previous study dealt with real estate subdividing activity in 9 urban areas. The authors state that the purpose of this study “is to determine the relationship between population growth, real estate subdividing, or the preparation of sites for urban use, and the rate at which those sites are brought into utilization by the erection of a major or permanent structure. . . .” It was thought desirable to elaborate upon the previous study with respect to 9 urban areas by attempting to measure the effect of population growth directly in terms of the number of subdivided lots actually utilized from year to year.

The first part of the Report goes into considerable detail in outlining the methods by which the data was collected; while the second half is a tabulation and explanation of that data.

It was found in the Grand Rapids metropolitan area that in 1909 the total lots of record numbered 47,213; and that in 1931 this number had increased to 91,337. This represented an increase of 93.46%. The total number of lots utilized in the region in 1909 was 25,893; while in 1931 this number had increased to 51,197, or 97.73%. The percentage of total lots of record that were vacant decreased from 45.2% in 1909 to 43.9% in 1931. This can hardly be considered as an improvement. The percentage of vacant lots in 1931 is admittedly lower than that of 1909, but one must consider the great number of vacant lots available at the

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\* *Land Subdividing and the Rate of Utilization* By Ernest M. Fisher and Raymond F. Smith. Published by the School of Business Administration, University of Michigan, 1932. 80 pages, \$1.

present time. While there were 21,320 in the area in 1909, there were over 40,000 vacant lots in 1931.

The Grand Rapids region has probably gone through its period of greatest expansion, and with the declining rate of population increase the condition probably is much worse than the percentage figures would indicate. It appears from the Report that when lot utilization began to take up some of the existing surplus of vacant lots, subdivision activity was not satisfied with mere equality but the number of lots subdivided immediately jumped—entirely out of proportion with the number required.

The Report is admirably illustrated by a series of charts and tables so that it is very easy to determine the number of lots in use in any one year and their relation to the number of lots platted, the areas in which platting and building development took place during 5-year periods and the relation between platting utilization and population. The study is probably of greatest value in presenting data to prove that conditions exist that we have all recognized, viz., that subdivision activity has been far in advance of actual utilization, and that there is a large economic loss sustained through the development of subdivisions in advance of their actual requirement.

It is estimated in this Report that the total investment in vacant lots in the particular region studied, including interest on the original cost of the lots and the cost of installing public improvements, is in excess of \$26,000,000—which amount happens to be greater than the total gross debt of all of the governmental units of the city of Grand Rapids.

If the utilization of lots should continue at the average rate prevailing between 1909 and 1931, it would require almost 40 years to absorb all of the lots now vacant. Whether this lesson—and I doubt if the Report was meant as a lesson—will be effective remains, of course, to be seen. Judging by past experiences, however, not only in the Grand Rapids region but in many other metropolitan areas it is doubtful if anything will be learned by those who feel that subdividing activity is a matter of speculation only.

WALTER H. BLUCHER  
Detroit

## A SOCIALIST SUBURB

British Socialists frequently declare on the platform that if they were only given the opportunity they would quickly solve the housing problem. It is interesting, therefore, to study a Socialist effort made in New South Wales to create a Garden Suburb at the public expense. \* \* \*

The experiment started under the most promising auspices in the year 1912, when a Housing Act was passed and a Housing Board appointed with the duty of creating a Garden Suburb on the same lines as that of the Hampstead Garden Suburb or of Bournville near Birmingham. The site selected was the Dacey district, about 5 miles from the centre of the city of Sydney. The land was of an undulating character, and the soil was light and sandy and well adapted for building purposes. For the first portion of the estate 336 acres were set aside, and on the basis of 7 cottages to the acre—the average under Dr. Addison's scheme in Great Britain in 1920 was 8 to the acre—there was room for 1,437 cottages, 40 shops, and also for schools, churches, a police station and recreation grounds.

The plan adopted was prepared by Sir John Sulman, F.R.I.B.A., who is well known as an outstanding authority on town-planning, in co-operation with Mr. J. F. Hennessy, a Sydney architect. The site was admirably laid out with a park, planted with trees and gardens, at the entrance from which four main avenues each 100 feet wide, radiated.

The value of the land, the greater part of which belonged to the Crown, was estimated at £65 per acre. But the cost of improvements, including road-making, levelling and drainage was £105,000. Thus the cost of the land when prepared for building operations was £337 per acre. It is interesting to compare this with the average price of £187 per acre paid in England for land acquired under the 1919 Act.

The New South Wales Government were enthusiastically behind the project for the new Garden Suburb. The designs were first prepared by the Government architect and subsequently competitive designs were invited from private architects. Only one of the latter was adopted, and it may be said that the majority of the buildings represent the work of a state architect and are good and well planned. Each cottage contains, in addition to a living room and bedrooms, a laundry, a bathroom, a pantry, a w.c., a fuel-shed and a veranda suitable for sleeping out. In the largest type there are approximately 910 superficial feet of floor space. They are, indeed, about the same size of cottages as those that have been erected during the last few years in England by local authorities. The Australian houses are built in Socialist bricks supplied from the government kilns. Even the rubble, freestone and ballasting came from the government quarries. Direct labor was employed. The Public Works Department acted in the position of contractors, and the Housing Board proudly announced in its first report that they believed that the work had been carried out more economically than would have been the case had it been done by private



enterprise. The daily rate of pay of a bricklayer was 13s., of a plasterer 13s., and of a carpenter and plumber 11s.

Great care was taken about the appearance of the suburb and the Director of the Botanic Gardens assisted in the planting of trees along the footways. The tenants were encouraged to look after their gardens and in return were charged rents which on the whole were from 15% to 20% cheaper than those charged by private landlords for similar accommodation in suburbs situated about the same distance from the center of the city.

As this was a Socialist scheme only one type of tenant was excluded. The only disqualification for becoming an occupant of one of the houses was the possession of any land with a building thereon within the State of New South Wales! As the rents were so much lower than elsewhere, there was naturally no lack of applicants. Among those who were the first tenants were a compositor, a quarryman, a fireman, a pastrycook, a waiter, a wharf laborer and men of similar manual occupations.

Great care was taken so that the buildings, both in their layout and construction, should be as good as possible; and on the whole, judging from the balance sheets, the cost was not unduly high for Australia. For example, a cottage containing a kitchen and three large rooms to be let at 18s. 6d. a week cost £640, including baths and drainage connection. A similar-sized house in Great Britain in 1928 was built for about £450, but it is necessary to remember that even before the war wages were very high in Australia and buildings cost equally extravagant. During the war a few new cottages were built at an average cost of about £350 and all was by direct labor.

The whole tone of the 1918 report was, however, that Socialism in practice had been brilliantly successful. Prizes were given at the public expense for the best garden in the suburb. Lawn mowers were supplied on the instalment system. The Governor, Sir Walter Davidson, made a State visit and complimented the tenants on their front gardens. Plans had been prepared for a Baby Clinic. The number of deaths was 4.27 per 1000, which compared more than favorably with the average of 9.75 for the city of Sydney. There was even a surplus shown in the balance sheet of £427 1s. 2d.

But the serpent was entering into this Eden. Both in the Dacey Garden Suburb and on other housing estates built by the community tenants were falling in arrears with their rents. The railway strike spreading to the water-side workers and the disastrous state of conditions resulted in many tenants being out of work for six months or more. In the State housing settlements certain rents had to be written off as irrecoverable.



After the war building operations were extended in spite of the many financial difficulties that were already being experienced. More cottages were built; shops were tenanted so that the residents in the suburbs should be able to live a community life; and the Baby Clinic was completed. The number of applicants asking to rent houses increased and preference in allocation was given to returned soldiers and soldiers' widows. The distinguished French soldier, General Pau, made an official visit and highly complimented the Government on their success. Two new streets were christened Haig Road and Monash Avenue.

Only in two places in the report is there any hint of any possible defect in this Socialist housing paradise. The arrears of rent had considerably increased and the Housing Board acknowledge that "the position is likely to be further accentuated by the seamen's strike, which began early in June." The Government was also changing its policy, and instead of providing houses at uneconomic rents was offering loans so as to enable workers to buy their own houses on easy terms, somewhat on the model of British Building Societies.

In the year 1920 the danger signal was at last clearly exposed. The report of that year was carefully prepared by officials to prepare the way for a climb down. Reference is specially made to the difficulty of obtaining suitable skilled labor, and private builders are accused of competing too successfully against the State builders. This is confessed in the following words:

The difficulty was further aggravated by the wages which suburban builders were prepared to pay in order to secure artisans. The Board was, in consequence, compelled to pay wages much in advance of those anticipated when the estimates for the various works were framed.

Australian experience in this matter was the same as that of England when the price of houses built under the Lloyd George administration rocketed upwards from £400 each to £1,400 in certain cases. In New South Wales the average price in 1920 increased to £765. The demand for accommodation was so great that both at Wollongong and at Forbes the jails were pulled down and the sites utilized for houses.

Just as in England, alternative materials were tried. An American expert announced that he could build cottages in concrete in three or four weeks. The comment on his claim, made in the Sixth Annual Report of the Housing Board, is illuminating: "The monolithic process was supposed to take three weeks to complete, but took much longer, the men working day and night, and it eventually took several weeks beyond that time to dry out sufficiently to be safe for occupation. The floors had to be relaid and cracks in the wall had to be repaired,



and generally the whole proposition could not be pronounced otherwise than as a failure. The arrangements provided for the Minister taking over the cottages at approximately £1,200, but it is understood they cost Mr. Menkins (the American expert) considerably more—nearly double.” New South Wales was as unfortunate in this experiment as were many English local authorities.

In 1921 there was violent Press criticism and evident disquietude on the part of the Government and no more cottages were erected. Churches, however, were opened in the Garden Suburb and a new school completed by the Education Department. Rents were increased and a special inquiry was held in order to discover why the cost of houses that had been built to be sold to applicants had so greatly exceeded the estimates. This inquiry revealed the unpleasant truth that Socialism in building is very expensive and that irregularities must be expected. The building operatives had failed to do their best, in spite of pledges given by the Building Trade Unions. Difficulties of supervision were aggravated because the men and their unions insisted on interviewing the Minister for Housing on all questions and ignoring the technical men in charge of the work. Thus time was wasted and costs mounted on the larger housing schemes. Finally the Housing Board had to report that it would be far more profitable to have the work carried out by private contract. What a climb down!

The staff responsible for administration had greatly increased under the Socialist regime and unfortunately serious blunders were discovered at the inquiry. It was, for example, conceded that there were shortages in the stocks of timber, bricks, cement, joinery, water-pipes and tar. Two clerks of the works had practically to be dismissed. Pilfering took place and the police had to be called in—in fact, there was a thorough scandal and political agitation for a scapegoat.

The defence of the Housing Board was that they had had to work under 7 different parliamentary chiefs in 4 years and that this deprived them of the benefits of a continuous and consistent policy. In other words, political interference had converted the building business which is peculiarly individual into a hopeless proposition. The Board confessed in their Tenth Annual Report that they had been placed in their operations at a distinct disadvantage as compared with private builders.

The tenants, too, were giving trouble and would not take proper care of the houses. This was notably the case where houses were sold without any proper contract being made; and the purchasers failed to maintain the properties in a decent condition of outside painting and repair pending the decision with regard to the final cost. Operatives,



tenants, staff, all had apparently become demoralized because they relied too much on public funds, and eventually the Housing Board announced:

Individual efforts in these areas have been conspicuously absent, and the tendency has invariably been for the holder to look to the Government to remedy everything.

The Eleventh and Final Report of this strange, sad history contains many complaints on the part of the Board against the Government, expressed in the following words: "The Board regrets that the Minister has not seen fit to extend to it in the carrying out of its duties of office that measure of confidence which invariably characterizes Ministers in their relations with their heads of departments." The Board had spent well over half a million pounds of public money; but losses continued to increase and the suburb was faced with bankruptcy.

Eventually the Housing (Amendment) Act of 1924 was passed by the New South Wales Parliament. This abolished the Housing Board that had been established with such great hopes twelve months before. The control of the Dacey Garden Suburb was handed over to the Public Trustee, who has kindly sent me for the purposes of this article all the necessary balance-sheets and details. A study of these documents shows that some of the estates were indeed bankrupt. At Bunnerong, for example, the arrears of instalments that had not been paid by people buying their own houses was over 26% of the amount due.

The lessons from this unhappy experience in New South Wales are surely obvious. They only confirm the experience gained in England from the operation of Mr. Lloyd George's 1919 Act, which produced some 170,000 houses, which in the main are now occupied by persons who could not be described as unskilled artisans, at a cost of £170,000,000. But enthusiastic housing reformers refuse to accept the teaching of the past, and in the summer of 1928 at an international conference held in Paris they passed a resolution declaring that continuous subsidies must be given out of public funds if the housing problem was to be solved. We may therefore expect that both Liberal and Socialist speakers at the next General Election will advocate more subsidies for houses. It is a pity they are not ready to study the Government Garden Suburb in New South Wales, beginning with high hopes and ideals and ending in bankruptcy.

B. S. TOWNROE  
London